DOCUMENT RESUME

ED 287 695 SE 048 650

TITLE Early Release of Summary Statistics on Academic

Science/Engineering Resources.

INSTITUTION National Science Foundation, Washington, D.C. Div. of

Science Resources Studies.

PUB DATE Oct 87

NOTE 38p.; Contains some small type which may not

reproduce well. For the 1983 report, see ED 238

716.

PUB TYPE Reports - Descriptive (141) -- Statistical Data (110)

EDRS PRICE MF01/PC02 Plus Postage.

DESCRIPTORS *College Science; *Degrees (Academic); Educational

Finance; *Engineering Education; *Expenditures;
*Federal Aid; Females; *Graduate Study; Higher
Education; Minority Groups; *National Surveys;
Research and Development; Research Universities;

Science and Society

IDENTIFIERS *National Science Foundation

ABSTRACT

This document contains a set of tabulations that are related to the science and engineering resources of universities and colleges. The tabulations were derived from three National Science Foundation (NSF) surveys that are conducted annually by NSF's Division of Science Resources Studies. Data presented in these tables are assembled from the most recently completed surveys and represent the latest totals available as of September 1987. The three surveys include different proportions of the higher education universe, depending on the degree of concentration of the variables being examined. The tabulations were based on surveys dealing with: (1) the expenditures of institutions granting science/engineering graduate degrees and schools with \$50,000 or more in separately budgeted research and development expenditures; (2) the federal support received by all institutions of higher education in the United States; and (3) graduate students from institutions granting science/engineering degrees and their affiliated health professional schools. (TW)



EARLY RELEASE OF SUMMARY STATISTICS ON ACADEMIC SCIENCE/ENGINEERING RESOURCES

Prepared by the
Universities and Colleges
Studies Group
Division of Science Resources Studies
National Science Foundation
(202) 634-4673

October 1987

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) "

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Dear Colleague:

Enclosed is a selected set of tabulations titled, "Early Release of Summary Statistics" that is related to the science and engineering (S/E) resources of universities and colleges. The tabulations were derived from three National Science Foundation (NSF) surveys conducted annually by the Division of Science Rescurces Studies. They are those most often requested and have been compiled for your information and analyses.

Selected data items for specific graduate institutions are also available on computer-generated Institutional Profiles and may be obtained by calling Richard Bennof on (202) 634-4636.

If you need further information, please do not hesitate to contact me at (202) 634-4673.

> Sincerely, James & Hock

James B. Hoehn

Study Director

Universities and Colleges Studies Group

Division of Science Resources Studies



SUMMARY STATISTICS ON ACADEMIC SCIENCE/ENGINEERING RESOURCES

The data presented in this summary are being released in advance of their publication and are derived from three surveys of academic science/engineering activities conducted annually by the National Science Foundation's Division of Science Resources Studies:

- 1. Survey of Scientific and Engineering Expenditures at Universities and Colleges, FY 1986 (the Expenditures Survey): Tables 1-8;
- 2. Survey of Federal Support to Universities, Colleges, and Selected Non-profit Institutions, FY 1986 (the Federal Support Survey): Tables 9-14; and
- 3. Survey of Graduate Science and Engineering Students and Postdoctorates, Fall 1986 (the Graduate Student Survey): Tables 15-24.

Note that the data provided in tables 1-14 cover fiscal years, while data in tables 15-24 are as of the Fall of each year. In the Expenditures and Graduate Student Surveys, data are submitted by institutions of nigher education; data on Federal obligations to academic institutions are collected directly from the major funding agencies.

Data presented in these tables are assembled from the most recently completed surveys and represent the latest totals available as of September 1987. Since both current-year and prior-year data are regularly reviewed and updated in consultation with agency and institutional respondents, the figures are subject to revision in subsequent years. Note that in these statistical tables, N/A means "not available," while N.E.C. means "not elsewhere classified."

The three surveys include different proportions of the higher-education universe, depending on the degree of concentration of the variables being examined. Survey coverage is as follows (numbers of institutions shown represent averages for the last eight survey cycles, excluding the 1978/79 cycle v hen the Expenditures and Graduate Student Surveys were mailed to doctorate-granting institutions only):

- 1. Expenditures Survey: Institutions granting science/engineering graduate degrees and schools with \$50,000 or more in separately budgeted R&D expenditures (about 550 institutions and their associated FIRDCs). Data for FY 1984 through FY 1986 are based on a sample of about 400 institutions.
- 2. Federal Support Survey: All institutions of higher education in the United States (about 2,400 institutions, their system offices, and their associated FFRDCs).
- 3. Graduate Student Survey: Institutions granting science/engineering degrees and their affiliated health professional schools (about 600 institutions). Data for Fall 1984 through 1986 are based on a sample of about 400 institutions.



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For further information on the academic science/engineering surveys' data availability, please contact NSF staff responsible for each survey system as listed below.

Expenditures Survey: Marge Machen (202) 634-4673
Federal Support Survey: Richard Bennof (202) 634-4636
Graduate Student Survey: J.G. Huckenpahler (202) 634-4787

ACADEMIC SCIENCE/ENGINEERING-SURVEY DISKETTES

The National Science Foundation (NSF) offers a free diskette service to those who wish to obtain data resulting from the most recent surveys conducted by the Division of Science Resources Studies.

Each data set is released on 5 1/4" diskettes suitable for use on IBM-compatible personal computers and is provided to the user upon receipt of the correct number of blank diskettes. All data sets contain the detailed statistical tables, technical notes, and a table of contents. Data sets are prepared in either standard ASCII format (including a table-printing program) or in LOTUS 1-2-3 (Release 1A) format. Some data sets are available in both formats. For further information concerning diskettes, contact NSF DISKETTE SERVICE, RDS Systems, Inc., 6110 Executive Blvd., Suite 605, Rockville, Maryland 20852.

ELECTRONIC BULLETIN BOARD

Remote access to Science Resources Studies data is available from the Electronic Bulletin Board via any personal computer equipped with a modem. It contains comprehensive statistical tabulations, brief narrative reports on current studies, and announcements of available data sets. Textual BULLETINS can be viewed while on the Board, but tabulations or FILES must be downloaded to the user's computer for viewing. The telephone number is (202) 634-1764. The Board is capable of handling 300, 1200, or 2400 Baud, with 8 data bits, No parity, 1 stop bit, and XMODEM protocol. For more information and help dial (202) 634-4250.



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TABLE 1. -- R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES 3Y SOURCE OF FUNDS, CHARACTER OF MORK, AND SCIENCE/ENGINEERING FIELD: FISCAL YEARS 1979-86

(DOLLARS IN THOUSANDS)

SOURCE, CHARACTER, AND FIELD	1979	1980	1581	1982	1983	1984	1985	1986
TOTAL	5,361,408	6,060,629	6,809,552	7,266,122	7,798,179	8,508,380	9,524,293	16,718,402
SOURCE OF FUNDS:								
FEDERAL GOVERNMENT STATE AND LOCAL GOVERNMENTS INDUSTRY INSTITUTIONAL FUNDS ALL OTHER SOURCES	3,595,271 470,073 194,186 728,298 373,580	4,097,011 491,069 236,967 827,116 408,466	4,556,889 544,202 290,741 972,435 445,285	4,746,803 609,043 333,455 1,077,678 499,143	4,952,731 624,442 377,930 1,255,780 587,296	5,385,678 682,843 460,641 1,349,812 629,406	5,997,773 729,411 542,849 1,556,562 697,697	6,633,34 902,96 667,36 1,774,42 740,30
CHARACTER OF WORK:				ļ	}	i		i
BASIC RESEARCHAPPLIED RESEARCH AND DEVELOPMENT	3,612,278 1,749,130	4,026,932 2,033,697	4,570,848 2,238,704	4,850,858 2,415,264	5,264,841 2,533,338	5,637,923 2,870,457	5,386,656 3,137,637	7,243,65 3,474,74
FIELD:							 	1
ENGINEERING, TOTAL 1/	768,407	864,924	960,677	1,025,513	1,110,811	1,207,104	1,386,717	1,609,09
AERONAUTICAL AMD ASTRONAUTICAL CHEMICAL CIVIL ELECTRICAL MECHANICAL OTHER, N.E.C.	_	46,285 67,557 88,641 184,050 146,163 332,228	1 147,140	144.1/1	149.881	96,199 133,692 291,795 176,682	205,625	398,20 224,20
ALL SCIENCES, TOTAL	4,593,001	5,195,705	5,848,875	6,240,609	6,687,368	7,301,276	8,137,576	9,109,30
PHYSICAL SCIENCES ASTRONOMY C'HEMISTRY PHYSICS OTHER, N.E.C.	206.421	677,293 58,740 243,982 322,230 52,341	764,673 67,337 283,899 356,859 56,578				411,615 550,045 81,204	460,08 622,29 82,66
ENVIRONMENTAL SCIENCES 1/ ATMOSPHERICEARTH SCIENCES OCEANOGRAPHY OTHER, N.E.C.	452,915	509,038 67,459 188,226 171,668 81,685	78,257 189,692 187,463	197,701	618,962 97,560 216,159 223,994 81,149	225,525	705,357 109,549 250,534 260,306 84,968	774,1 124,8 261,8 275,5 111,9
MATHEMATICAL SCIENCES	78,477	78,667	88,793	1		124,398	129,799	152,2
COMPUTER SCIENCES				1	1 .		· ·	1
LIFE SCIENCES	2,832,523 602,485 914,806 1,237,556 77,676	3,217,658 679,880 1,030,429 1,414,345 93,004	3,670,596 772,434 1,186,333 1,599,203 112,626	3,769,593 844,040 1,286,548 1,717,072 121,933	4,233,143 895,520 1,408,240 1,801,576 127,807	4,617,226 930,245 1,555,330 1,989,803 141,848	5,155,422 1,028,549 1,697,690 2,259,525 169,658	5,746,1 1,122,3 1,832,9 2,578,2 212.6
PSYCHOLOGY		1	i	I .		3		
SOCIAL SCIENCES	45,431	90, 158 55, 395 88, 556	370, 351 99, 496 56, 315 94, 658 119, 882	95,590 61,371 80,252	78,32	74,626	78,64	3 88,3
OTHER SCIEPCES, N.E.C				152,180	162,037	176,433	182,060	220,3

^{1/} DETAIL NOT SEPARATELY AVAILABLE PRIOR TO 1980.



TABLE 2. -- FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES BY CHARACTER OF HORK AND SCIENCE/ENGINEERING FIELD: FISCAL YEARS 1979-86

(DOLLARS IN THOUSANDS)

CHARACTER AND FIELD	1979	1980	1981	1982	1983	1984	1985	1986
TOTAL	3,595,271	4,097,011	4,556,889	4,746,803	4,952,731	5,385,678	5,997,773	6,633,347
BASIC RESEARCHAPPLIED RESEARCH AND DEVELOPMENT	2,571,744 1,023,527	2,854,095 1,242,916	3,246,554 1,310,335	3,391,563 1,355,240	3,533,467 1,419,264	3,780,209 1,605,469	4,251,485 1,746,288	4,747,653 1,885,694
FIELD:								
ENGINEERING, TOTAL 1/	526,364	595,446	662,283	697,943	737,084	778,118	856,402	968,474
AERONAUTICAL AND ASTRONAUTICAL CHEMICAL CIVIL ELECTRICAL MECHANICAL OTHER, N.E.C.	11111	35,610 46,057 58,920 139,621 99,774 215,464	55,162 67,906	47,889 49,615 58,996 173,799 97,606 270,038	101.276	52,183 54,289 74,791 207,267 117,734 271,853	59,719 57,620 81,202 228,574 132,106 297,181	67,345 66,135 91,517 265,885 144,529 333,063
ALL SCIENCES, TOTAL	3,068,907	3,501,565	3,894,696	4,048,860	4,215,647	4,607,561	5,141,370	5,664,873
PHYS)CAL SCIENCES ASTROMOMY CHEMISTRY PHYSICS OTHER, N.E.C.	4 /0,680 36,245 156,516 252,518 45,401	554,819 44,441 189,427 279,890 41,061	618,053 47,828 216,052 308,549 45,624	648,917 51,675 230,302 306,025 60,915	50,370 247.652	778,610 53,111 277,957 388,188 59,353	60,112 307,214	975,516 64,009 337,913 509,574 64,021
ENVIRONMENTAL SCIENCES 1/ ATMOSPHERIC	329,154 - - - -	372,533 55,524 131,472 132,726 53,011	391,727 58,690 127,927 145,923 59,187	391,159 68,297 126,996 153,574 42,292	426,847 75,943 135,808 171,352 43,744	450,967 82,107 139,410 183,582 45,868	477,550 86,431 152,825 191,791 46,504	520,137 99,485 150,942 207,095 62,615
MATHEMATICAL SCIENCES	60,431	61,114	67,672	71.837	76,397	91,064	95,691	112,364
COMPUTER SCIFNCES	69,192	76,982	93,452	106,918	127,697	161,555	193,154	227,428
LIFE SCIENCES	1.818,779 184,676 664,675 914,905 54,523	2,094,873 211,897 763,373 1,056,561 63,042	2,362,586 233,656 865,465 1,187,179 76,286	2,492,608 254,756 920,822 1,238,622 78,408	2,563,362 259,663 983,318 1,242,736 77,645	2,796,038 270,074 1,087,778 1,349,158 89,028	3,140,747 298,377 1,192,986 1,547,246 102,138	3,439,947 298,075 1,278,995 1,738,382 124,495
PSYCHOLOGY	72,257	81,193	92,457	89,086	3 0,599	98,379	107,480	118,449
SOCIAL SCIENCES ECONOMICS POLITICAL SCIENCE SOCIOLOGY OTHER, N.E.C.	155,074 40,026 20,561 47,144 47,343	181,627 43,430 23,676 57,140 57,381	186,978 44,508 23,362 56,353 62,755	161,795 41,199 22,521 45.965 52,110	147,573 37,072 19,926 42,405 48,170	144,892 41,953 18,305 38,555 46,076	154,647 42,450 20,073 40,256 51,867	166,948 42,878 19,731 43,685 60,655
OTHER SCIENCES, N.E.C	73,340	78,424	81,681	86,540	85,725	86,056	89,597	104,083

^{1/} DETAIL NOT SEPARATELY AVAILABLE PRIOR TO 1980.



SOURCE: NATIONAL SCIENCE FOUNDATION, SRS

TABLE 3. -- R&D EXPENDITURES AT DOCTORATE-GRANTING INSTITUTIONS BY SOURCE OF FUNDS, CHARACTER OF HORK, AND SCIENCE/ENGINEERING FIELD: FISCAL YEARS 1979-86

(DOLLARS IN THOUSANDS)

SOURCE, CHARACTER, AND FIELD	1979	1980	1981	1982	1983	1984	1985	1986
10TAL	5,271,643	5,958,867	3,695,996	7,147,677	7,675,992	8,367,143	9,381,822	10,570,638
SOURCE OF FUNDS:								
FEDERAL GOVERNMENT STATE AND LOCAL GOVERNMENTS INDUSTRY INSTITUTIONAL FUNDS ALL OTHER SOURCES	3,534,215 461,534 190,733 716,069 369,092	4,030,009 481,554 232,758 813,577 401,169	4,482,252 534,047 234,685 958,595 436,417	4,671,543 595,452 326,984 1,063,399 490,299	4,876,393 610,737 373,897 1,239,070 578,895	5,292,286 670,128 450,895 1,336,886 616,948	5,898,245 720,380 534,199 1,542,089 686,909	6,529,440 892,92 657,36 1,759,384 731,529
CHARACTER OF MORK:								
BASIC RESEARCH APPLIED RESEARCH AND DEVELOPMENT	3,561,649	3,965,960 1,992,907	4,501,674	4,773,456	5,182,585	5,545,843	6,284,154	7,143,480
FIELD:	-,,	_,,,,_,,	2,1,4,023	2,5,4,221	2,4,0,401	,,,,,,,,,,,,	3,077,000	0,421,120
ENGINEERING, TOTAL 1/	761.142	857,643	952.823	1.017.616	1.101.215	1,189,731	1.367.309	1.586.389
AERONAUTICAL AND ASTRONAUTICAL CHEMICAL CIVIL ELECTRICAL MECHANICAL OTHER, N.E.C.		45,742 66,876 86,703		50 200	64,242 90,556 107,750 257,584 148,225	64,445 95,816 128,532 289,291		
ALL SCIENCES, TOTAL	,	5,101,824	5,743,173	6,130,061	6,574,777	7,177,412	8,014,513	8,984,249
PHYSICAL SCIENCES ASTRONOMY CHEMISTRY PHYSICS OTHER, N.E.C.	585,227 47,969 1°8,768 286,738 51,732	659,047 58,087 234,359 316,094 50,507	746,336 66,746 272,932 350,797 55,861	72,662 296,122 359,767	877,761 73,380 322,876 408,201 73,204	971,894 77,492 357,963 462,572 73,867	1,110,362 89,135 398,049 542,391 80,817	1,237,423 94,915 446,534 614,402 81,57
ENVIRONMENTAL SCIENCES 1/ ATMOSPHERIC EARTH SCIENCES OC.ANOGRAPHY OTHER, N.E.C.		496,188 65,236 182,457 169,612 78,883	532,947 75,223 183,906 183,583 90,235	542,495 83,366 189,647 194,726 74,756	220,801	629,264 102,692 219,468 228,918	683,367 108,698 246,331 250,416 77,922	1
MATHEMATICAL SCIENCES	77,141	76,759	86,198	94,813	104,364	120,630	127,827	149,32
COMPUTER SCIENCES	95,276	111,415	130,880	146,144	172,783	220,041	276.340	312,09
LIFE SCIENCES AGRICULTURAL SCIENCES BIOLOGICAL SCIENCES MEDICAL SCIENCES OTHER, N.E.C.	2,802,489 591,631 899,789 1,234,837 76,232	3,184,002 666,756 1,015,719 1,410,704 90,823	3,631,982 756,048 1,169,329 1,596,507 110,098	3,926,994 825,681 1,266,783 1,715,106 119,424	4,189,394 874,379 1,389,272 1,799,943 125,800	4,567,886 904,151 1,537,673 1,986,219 139,843	2,256,896	5,693,854 1,095,093 1,815,085 2,574,670 209,000
PSYCHOLOGY		l	122,134		i		160,393	178,679
SUCIAL SCIENCES	283,183 80,780 44,284 72,059 86,060	324,129 87,292 53,331 83,331 100,175	350,331 96,646 54,309 86,364 113,012	339,178 93,999 59,328 73,373 112,478	336,155 94,828 53,696 71,218 116,413	54,804	59,291	441,390 129,690 66,800 81,71 163,17
OTHER SCIENCES, N.E.C	129,710			148,880	158,187			218,06
	 -	ļ	L	L		↓	L	

1/ DETAIL NOT SEPARATELY AVAILABLE PRIOR TO 1980.



TABLE 4. -- R&D EXPENDITURES AT DOCTORATE-GRANTING INSTITUTIONS 8Y GEOGRAPHIC DIVISION, STATE, AND SOURCE OF FUNDS: FISCAL YEAR 1986 (DOLLARS IN THOUSANDS)

DIVISION AND STATE	TOTAL	FEDERAL GOVERNMENT	STATE AND LOCAL GOVERNMENTS	INDUSTRY	INSTITU- TIDNAL FUNDS	ALL OTHER Sources
TOTAL	10,570,638	6,529,440	892,923	657,362	1,759,384	731,529
EH ENGLAND	993,504	719,268	22,489	72,779	92,281	86,687
CONNECTICUT HAINE HASSACHUSETTS NEM HAMPSHIRE RHODE ISLAND VERMONT	195,173 19,315 643,010 42,171 64,136 29,699	128,501 8,584 484,638 29,544 48,153 19,848	4,351 796 11,286 3,188 939 1,929	5,880 2,856 54,961 1,443 4,308 3,331	40,923 5,075 31,796 4,899 6,213 3,375	15,518 2,004 60,329 3,097 4,523 1,216
DDLE ATLANTIC	L.	1,140 226	92,446	121,392	239,794	175,221
NEM JERSEY	İ	83,541 716,460 340,225	22,915 49,270 20,261	8,173 57,381 55,838	47,457 117,301 75,036	18,178 106,777 50,27
AST NORTH CENTRAL	1	890,104	138,834	84,604	292,131	105,440
ILLINDIS INDIANÀ MICHIGAN OHIO HISCONSIN	438,237 176,374 341,436 288,822 266,244	261,602 107,053 188,843 177,632 154,974	29,128 17,408 25,808 20,435 46,055	19,432 14.967 20,748 18,971 10,486	98,510 30,916 81,693 43,899 37,113	29,565 6,030 24,344 27,885 17,616
HEST NORTH CENTRAL	721,525	348,524	119,670	41,778	161,422	50,13
IOHA KANSAS HINNESOTA HISSOURI NEBRASKA SOUTH DAKOTA	146,257 73,223 201,743 186,411 69,765 33,106 11,020	69,892 32,517 100,208 102,245 28,495 12,258 2,809	13,654 25,122 31,819 11,405 15,955 15,9317 6,398	4,749 1,271 11,157 18,431 4,036 1,566 568	47,601 11,065 37,251 42,155 18,835 3,696 819	10,361 3,248 21,208 12,175 2,444 269 426
SOUTH ATLANTIC		1,123,654	178,190	108,720	289,920	63,14
DELAMARE DISTRICT OF COLUMBIA FLORIDA GEORGIA MARYLAHD NORTH CAROLINA SOUTH CAROLINA VIRGINIA MEST VIRGINIA	595,121 270,746 81,789	12,578 56,57, 112,917 135,986 491,551 168,232 30,947 108,176 6,693	1,645 201 10,855 33,355 36,095 48,933 13,979 32,532	3,551 3,606 22,352 29,981 12,969 19,983 5,033 10,793	9,349 6,026 74,257 78,063 42,596 22,216 28,321 23,138 4,554	1,67; 3,93; 14,51; 7,54; 10.51; 11,38; 3,50; 9,14;
CAST SOUTH CENTRAL	361,014	179,306	70,727	32,536	62,488	15,95
ALABAMA KENTUCKY HISSISSIPPI TENNESSEE	59,701	69,318 24,963 21,878 63,147	22,296 11,588 21,853 14,990	10,784 8,173 2,995 10,584	22,028 19,157 10,937 10,366	7,87 1,55 2,03 4,49
HEST SOUTH CENTRAL	947,563	457,266	130,445	55,274	206,620	97,95
ARKANSAS	35,379 134,802 98,963 678,419	12,385 47,396 28,919 368,568	9,390 32,251 3,680 85,124	3,068 6,135 7,310 38,761	7,875 39,411 52,130 107,204	2,66 9,60 6,92 78,76
HOUNTAIN	1	396,852	60,060	54,032	117,6,4	30,44
ARIZOMA COLORADO IDAHO MONTANA NEVADA NEH MEXICO UTAH MYOMING	23,729 26,235 22,853 118,508 112,624	76,615 125,715 9,328 9,077 12,689 76,274 77,833 9,321	8,024 6,762 7,417 7,695 1,196 17,331 10,471 1,164	14,411 8,766 2,787 2,649 3,349 14,770 5,477 1,779	53,798 21,968 4,101 6,814 3,755 6,711 14,270 6,247	7,83 12,54 9 1,82 3,42 4,57
PACIFIC	1	1,257,262	70,348	86,135	288,076	106,30
ALASKA CALIFORNIA HAMAII OREGON HASHINGTON	27,686 1,369,799 57,383	14,282 971,393 35,322 74,179 162,086	3,773 23,921 18,771 18,376 5,507	58,559 508 7,333 18,754	8,347 238,602 2,064 10,014 29,049	30 77,32 71 13,52 14,44
DUTLYING AREAS	_	16,978	9,714	112	8,988	24

TABLE 5. -- TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1983-86

(DOLLARS IN THOUSANDS)

		TO	TAL		FEDERALLY FINANCED				
INSTITUTIONAL RANKING	1986	1985	1984	1983	1986	1985	1984	1983	
TOTAL, ALL INSTITUTIONS		9,524,293	8,508,380			5,997,773	5,385,678	4,952,731	
1 JOHNS HOPKINS UNIV 1/ 2 MASS INS) OF TECHNOLOGY 2/ 3 UNIV OF MIS-MADISON 4 CORNELL UNIVERSITY 2/ 5 STANFORD UNIVERSITY 2/ 6 UNIVERSITY OF MINNESOTA 7 UNIVERSITY OF MICHIGAN 8 LWIVERSITY OF MASHINGTON 9 ULIV OF CAL LOS ANGELES 10 UNIV OF CAL SAN DIEGO	440,844 257,726 231,099 225,400 223,162 201,743 187,859 186,572 168,158 161,054	398,630 242,966 208,425 203,226 199,185 173,322 163,713 163,962 149,743	350,891 222,134 184,190 169,450 174,675 158,223 155,987 146,947 132,134 140,987	303,115E 200,349 168,282 153,323 157,745 151,441 132,864 133,523 113,266 147,008	412,714 201,097 138,784 134,660 192,076 100,308 118,069 141,973 121,668 128,250	367,053 189,935 123,989 119,319 172,423 87,776 106,147 135,830 109,689 115,632	331,859 174,938 110,704 100,767 149,520 79,489 99,341 119,785 96,524 115,349	282,386 162,801 100,026 90,185 135,172 79,637 84,120 108,512 83,699 123,433	
	2,283,617	2,048,723	1,835,618	1,660,916		1,527,793	1,378,276	1,249,971	
11 TEXAS A & M UNIVERSITY 12 UNIV OF CAL BERKELEY 2/ 13 UNIV OF ILL URBANA 14 HARVARD UNIVERSITY 15 UNIV OF PENNSYLVANIA 16 UNIV OF CAL SAN FRANCISCO 17 PENNSYLVANIA STATE UNIV 18 CDLUMBIA UNIV MAIN DIV 19 UNIV OF TEXAS AT AUSTIN 20 UNIVERSITY OF ARIZONA	160,938 158,990 158,419 154,390 152,746 147,785 146,270 145,416 145,324 124,790	146 381 149,900 139,563 138,063 130,397 131,348 113,196 136,577 123,337 105,765	121,227 133,811 119,198 124,330E 121,963 113,404 95,061 124,292 114,664 94,946	103,219 118,951 99,135 118,602E 113,499 89,247 89,767 113,847 110,570 89,192	75,936 102,578 86,789 111,503 105,925 105,694 82,412 128,436 75,152 61,973	71,346 96,779 80,536 103,556 92,893 95,615 70,099 120,120 62,462 51,694	53,201 87,653 71,182 93,430 89,831 82,822 60,444 107,874 56,482 47,411	43,813 76,917 59,824 80,516 67,035 56,875 100,574 58,231 44,741	
TOTAL, 1ST 20 INSTS.	3,778,685	1	2,998,514		2,625,997	2,372,893	2,128,606	1,928,303	
21 UNIV OF CAL DAVIS 22 YALE UNIVERSITY 23 OHID STATE UNIVERSITY 24 UNIVERSITY OF GEORGIA 25 UNIV OF SOUTHERN CAL 26 UNIV OF MO COLLEGE PARK 27 GEORGIA INSTITUTE OF TECH 28 UNIVERSITY OF COLORADO 29 UNIVERSITY OF FLORIDA 30 PURDUE UNIVERSITY	123,788 115,879 112,623 111,745 109,844 106,701 105,457 104,576 102,770 102,126	114,862 107,245 103,350 91,253 97,282 96,484 90,445 93,416 91,298 88,866	105,791 103,711 87,402 83,829 87,278 84,442 88,507 85,433 85,057 83,478	98,118 100,269 83,108 70,665 84,395 81,504E 82,924 75,798 73,467 75,510	48,549 87,407 56,418 32,184 92,906 43,971 58,432 74,887 43,412 56,475	47,652 88,922 53,240 28,403 76,425 39,450 50,349 69,359 42,031 48,542	45,436 85,909 46,060 26,581 64,239 33,033 51,241 59,080 39,946 43,524	43,439 85,205 43,686 22,434 57,976 31,094 49,533 55,028 32,708 42,147	
	4,874,194		1 .	1	3,220,638	2,917,266	2,623,655	2,392,553	
31 MICHIGAN STATE UNIVERSITY 32 UNIVERSITY OF ROCHESTER 2/ 33 NEM YORK UNIVERSITY 34 NC STATE UNIV AT RALEIGH 35 MASHINGTON UNIVERSITY 36 LOUISIANA STATE UNIV 37 UNIVERSITY OF CHICAGO 2/ 38 UNIV OF NC AT CHAPEL HILL 39 NORTHMESTERN UNIVERSITY 40 RUTGERS THE ST UNIV OF NJ	100,861 95,824 92,787 92,695 90,226 89,933 88,026 85,454 30,178 79,894	92,515 86,650 83,896 87,996 80,233 88,953 79,958 72,337 59,392	85,426 73,970 73,488 75,824 77,392 72,370 77,022 53,960 68,246 51,568	79,043 65,305 68,544 59,909 69,357 68,383 75,314 50,892 51,075 49,729	47,725 75,939 69,099 30,851 68,399 26,699 73,304 64,625 46,755 24,059	46,605 64,064 60,567 28,229 61,050 25,495 66,950 55,746 42,317 23,947	44,133 55,015 54,298 25,668 57,537 19,981 64,010 44,430 40,709 19,984	43,067 48,744 49,860 23,286 54,350 18,044 61,985 43,384 36,519 18,894	
	5,770,072		4,603,4)8	4,170,254			3,049,420		
41 DUKE UNIVERSITY 42 CALIFORNIA INST OF TECH 2/ 43 OREGON STATE UNIVERSITY 44 VA POLYTECH INST & ST U 45 UNIVERSITY OF PITTSBURGH 46 UNIVERSITY OF SCI & TECH 2/ 48 UNIVERSITY OF CONNECTICUT 49 CARREGIE—MELLOM UNIVERSITY 50 YESHIVA UNIVERSITY	73,596 72,642 72,366 71,920 70,260	68,899 65,810 74,768 61,966 63,796 64,923 67,276 75,155 60,292 36,656	61,025 50,409 67,320 53,113 53,540 56,770 62,472 69,167 53,787 58,893	55,040 49,824 62,723 47,802 47,313 54,771 64,861 58,902 43,174 53,812	62,879 63,708 41,300,259 55,805 52,497 17,376 36,142 41,706 56,922	37,666 55,794	50,793 43,390 40,482 23,090 40,668 41,468 20,752 44,592 33,419 51,494	40,102	
TOTAL, 1ST 50 INSTS.	6,516,140	5,815,151	5,189,904	4,708,476	4,206,694	3,817,449	3,439,571	3,146,222	

SEE FOOTNUTES AT END OF TABLE.



(DOLLARS IN THOUSANDS)

		TO	TAL			FEDERALLY	FINANCED	
INSTITUTIONAL RANKING	1986	1985	1984	1983	1986	1985	1984	1983
51 BAYLOR COL OF MEDICINE 52 SURY AT BUFFALO 53 UNIVERSITY OF MIAMI 54 U TEXAS SYSTEM CANCER CTR 55 ROCKEFELLER UNIVERS TY 56 UNIVERSITY OF UTAM 57 UNIV ALABAMA BIRMINGHAM 56 INDIANA UNIVERSITY 59 UNIV OF MISSOURI COLUMBIA 60 CASE MESTERN RESERVE UNIV	68,993 64,404 64,154 63,318 63,216 60,478 59,401 59,160 57,653 57,530E	63, 197 57, 045 58, 035 56, 137 59, 159 54, 354 47, 167 54, 796 50, 765 51, 598	55,746 57,711 51,057 49,317 55,353 50,416 40,407 47,645 46,075 47,217	54,936 50,129 48,213 44,509 52,000 46,830 37,311 44,331 44,231 42,691	46,729 47,308 36,531 21,304 35,738 51,428 45,337 40,074 20,068 47,032	41,749 42,860 32,817 19,408 30,047 45,564 39,030 37,527 18,577 42,182	37,378 39,417 30,6\4 16,379 26,713 41,606 32,383 32,565 17,325 39,337	36,772 38,415 32,236 15,112 23,625 37,981 25,509 29,882 16,133 34,963
	7,134,447	1	5,686,848	5,167,777	4,598,193	1 ' '	3,753.318	3,456,860
61 UNIVERSITY OF VIRGINIA 62 UNIV OF HAMAII—MANDA 63 OKLAHOMA STATE UNIVERSITY 64 UNIV OF HEBRASKA-LINCOLN 65 UNIV OF ILL CHICAGO 66 UNIVERSITY OF KENTUCKY 67 BOSTON UNIVERSITY 68 SUNY AT STONY BROOK 69 U TEX HLTH SCI CTR DALLAS 70 NEM MEXICO STATE UNIV	55,158 54,846 53,770 53,225	51,653 54,025 49,094 47,809 48,734 47,387 44,135 47,495 46,671 46,198	41,815 51,051 48,727 42,920 44,544 45,058 39,272 41,848 42,461 41,646	37,620 45,401 42,5031 44,597 44,497 40,829 32,421 36,941 36,456 41,579	38,541 35,322 13,1231 20,823 30,109 21,736 45,457 35,249 38,504 33,394	35, 152 34, 886 11, 833 17, 156 26, 357 16, 497 38, 257 31, 946 34, 087 29, 235	31,947 32,701 9,170 14,195 24,829 15,922 34,276 28,046 29,175 29,159	28,564 27,633 11,5441 12,750 24,549 13,786 27,966 25,639 26,561 30,750
TOTAL, 1ST 70 INSTS.	7,680,009	ა,850,6 05	6,126,190	5,570,621	4,910,451	4,442,616		3,666,542
71 PRINCETON UNIVERSITY 72 EMORY UNIVERSITY 73 UNIV OF CAL IRVINE 74 UNIVERSITY OF NEN MEXICO 75 COLORADO STATE UNIVERSITY 76 AUBURN UNIVERSITY 77 UNIV OF CAL RIVERSIDE 78 UNIV OF MASS AT AMMERST 79 UNIVERSITY OF CINCINNATI 80 FLORIDA STATE UNIVERSITY	51,789 51,115 49,979 49,795 49,359 47,930 47,881 46,434 44,368 44,179	46,027 30,706 44,458 45,581 44,171 36,279 44,233 37,719 42,709 34,969	40,877 27,522 37,023 33,161 42,876 29,977 40,233 33,199 39,747 29,840	37,017 24,284 33,293 33,3661 41,572 26,176 37,236 37,236 35,195 22,767	36,199 32,819 38,328 35,750 36,592 11,893 14,627 25,127 27,758 21,850	30,892 26,136 34,772 33,040 28,702 10,237 13,864 21,338 24,924 16,910	27,747 22,896 29,929 23,342 26,479 8,448 13,127 18,773 22,350 12,054	25,027 20,163 27,484 23,0731 25,321 8,083 11,602 17,072 20,074 10,810
TOTAL, 1ST 80 INSTS.	8,162,838	7,257,457	6,480,645	5,891,213		4,683,431		3,855,251
81 MISSISSIPPI STATE UNIV 82 MODDS HOLE OCNGRPHIC INST 83 MASHINGTON STATE UNIV 84 UTAH STATE UNIVERSITY 85 KANS ST U AG & APP SCI 86 CUMY MT SINAI SCH OF NED 87 CLEMSON UNIVERSITY 88 VANDERBILT UNIVERSITY 89 UNIVERSITY OF OKLAHOMA 90 UNIV OF CAL SANTA BARBARA	1	41,376 43,132 45,878 37,526 37,233 37,750 32,326 34,180 42,290 30,055	38,410 43,454 38,304 36,642 35,598 31,273 29,900 29,760 40,129 27,404	35,714 42,070 36,878 36,711 35,130 28,561 27,645 26,322 40,987 22,884	12,781 38,666 20,113 22,814 12,969 26,166 7,550 27,269 14,263 27,320	11,151 38,560 20,567 21,716 10,421 23,997 9,965 24,709 17,229 23,131	10,310 37,765 12,908 19,983 10,766 21,411 6,668 21,649 16,003 21,552	7,775 35,997 12,568 19,058 20,587 7,822 19,889 14,206 17,863
TOTAL, 1ST 90 INSTS.	8,567,364	t		6,224,113	5,401,304	4,884,877	4,386,898	4,021,279
91 VIRGINIA COMMONHLTH UNIV 92 TULANE UNIVERSITY 93 MAYNE STAZE CHIVERSITY 94 ARIZONA STATE UNIVERSITY 95 U TEX HITH SCI CTR S ANTO 96 U TEX HITH SCI CTR HOUSTN 97 UNIV OF RHODE ISLAND 98 BROHN UNIVERSITY 99 UNIVERSITY OF KANSAS 100 UNIV OF NED 2 DENT OF N J	34,871 33,589 33,580 32,165 32,310 32,3171 31,906	35, 221 28, 144 27, 953 29, 845 26, 566 28, 241 28, 344 26, 733I 23, 521	25,761 23,919 26,306 22,048 25,911 20,526 23,481 25,771 24,010I 20,113	26,235 22,440 23,990 22,294 24,743 19,362 24,7661 22,805 22,1111 18,831	29,280 18,420 15,769 13,541 22,779 22,604 22,8201 25,333 18,8021 15,840	26,816 14,471 15,682 12,556 19,697 19,623 20,577 22,645 16,9541 14,753	20,658 12,294 14,965 9,031 16,550 14,732 21,081 21,294 15,2771 12,561	21,998E 11,221 12,713 10,288 16,005 14,410 19,326I 19,728 14,097I 11,456
	8,895,699	:	1	ľ		1	1	4,172,521
TOTAL, ALL OTHER SAMPLED INSTS.	1,744,471	1,527,245	1,364,024	1,346,489	979,214	885,131	797, 177	780,210
ESTIMAT TOTAL NON-SAMPLED INSTS.	78,232	74,336	74,911	i		44,591	l .	0

^{1/} INCLUDES APPLIED PHYSICS LABORATORY HITH \$295 MILLION IN TOTAL AND \$290 MILLION IN FEDERALLY FINANCED R&D EXPENDITURES.

NOTE: A NUMBER OF INSTITUTIONS HAVE DEVELOPED OR ARE IN THE PROCESS OF DEVELOPING NEW COMPUTER SYSTEMS AND METHODOLOGIES MHICH EMABLE THEM TO REPORT HORE ACCURATELY THE TOTAL COST OF SCIENCE AND ENGINEERING RESEARCH. FY 1986 COMPARISONS HITH DATA REPORTED IN EARLIER YEARS MAY BE INAPPROPRIATE IN SOME AREAS.

NUMBERS FOLLOMED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOMED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOMED BY "C" INDICATE CONFIDENTIAL DATA.



^{2/} DOES NOT INCLUDE RAD EXPENDITURES AT UNIVERSITY ASSOCIATED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS (FFROC'S).

TABLE 6. -- INDUSTRY-SPONSORED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES: FISCAL YEARS 1979-86

(DOLLARS IN THOUSANDS)

INSTITUTIONAL BANKING	1986	1985	1984	1983	1982	1981	1980	1979
TOTAL, ALL INSTITUTIONS	667,362	542,849	460,641	377,930	333,455	290,741	236,967	194,18
L MASS INST OF TECHNOLOGY GEORGIA INSTITUTE OF TECH	34,764 21,944 17,591	32,007 18,730 11,780 15,715	26,458	17,944 13,255 7,522	17,195 11,359	14,964 8,581 5,258	11,402 6,243	6,55
3 CARNEGIE-MELLON UNIV 🔠	17,591	11,780	18,131 12,603	7,522	11,329	5,258	5,010	4,89
PENNSYLVANIA STATE UNIV 5 UNIVERSITY OF WASHINGTON	16.707	15,715	12.995	14.990	10.581	10.056	7,842	5,4 3,1
CORNELL UNIVERSITY	16,493 14,256	8,887 12,526	6,801 13,229	6,176 9,206	5,140 7,495	4,943 5,879	3,830 5,153	3,1: 4,4
CORNELL UNIVERSITY OUT OF CAL LOS ANGELES 1/ BUNIVERSITY OF MICHIGAN	12.659	. 0		ום	0 1	0	0 1	
B UNIVERSITY OF MICHIGAN 	12,481 11,352	11,677 9,617	7,559 8 339	5,9%	7,408 2,388	6,712	6,145 1,029	6,1
UNIVERSITY OF ARIZONA	11,158	9,402	7,559 8,339 7,837	5,60° 7,956	8,554	1,060 7,567	5,923	4,8
TOTAL, 1ST 10 INSTS.	169,603	130,341	113,952	86,489	74,964	65,020	52,577	41,7
UNIVERSITY OF MINNESOTA	11,157	8, 135 8, 249 8, 254 8, 532E	8,053	5,962	4,720 2,712I 3,650	4,559 2,500 2,388	4,352	3,6
? N C STATE UNIV AT RALEIGH B UNIVERSITY OF FLORIDA	10,452 10,038	8,254	3,026 5,000	3,246	2,7121	2,500	1,800 3,045E	3,0 2,0
UNIV OF MD COLLEGE PARK	y.384E	8,532E	5,000 7,691E	4,345 7,539E	4,964E}	2,817	2.263	1.1
UNIVERSITY OF MIAMI STANFORD UNIVERSITY	8,897	7,892 8.044	5,600 9,043	4,384 6,430	4,605 8,969	1,690	1.895	1.7
' PURDUÉ UNIVERSITY	8,833 8,776 8,571	9.583	9.232 i	9,269	7,405	5,713 6,849	3,215 4,756	3,2 3,8
UNIV OF ILL URBAHA UNIVERSITY OF KENTUCKY	8,571 8,173	7,506 4,768	4,922 4,378	3,448 3,007	1,598 3,337	4,103	3,404	2.4
UNIV OF HIS-MADISON	8,007	7,217	5,451	4,502	3,446	2,763 2,880	312 2,615	2,2
TOTAL, 1ST 20 INSTS.	261,891	208,521	176,348	138,621	120,370	101,282	80,234	66,0
TEXAS A & M UNIVERSITY	7,944 7,826	11,731	5,601	6,483	4,933	6,219 3,752	4,281	
SYRACUSE UNIVERSITY	7,397	7,140 2,298 5,193	6,559 1,120	6,431 943	4,260 1,481	942	3,699 213	3,0
DUKE UNIVERSITY	7.300	5,193	A 677 (3,166	5101	1,053	779	1,4
NEW MEXICO STATE UNIV	6,985 6,7231	6,237E 5,410E	5,121E 4,883E	4 6055	4 5505	4 4 2 2 5	2 00 5 5	2 5
'UNIVERSITY OF ROCHESTER	0,714	6.896 i	7,134	4,695E 6,481	4,550E 4,561 6,515	4,422E 7,336 5,658	3,995E 7,869	3,5 7,9
VA POLTTECH INST & ST U UNIV OF CAL BERKELEY 1/	6,463 6,143	5,924	5,818	5,988	6,515	5,658	3,692	3,3
UNIV OF CAL SAN DIEGO 1/	5,995	ŏ	ŏ	ŏ	ŏ	8	8	
TOTAL, 1ST 30 INSTS.	331,381	259,350	217,206	172,808	147,180	130,664	104,762	85,7
RENSSELAER POLYTECH INST UNIVERSITY OF PITTSBURGH	5,813I 5,428	5,262 4,069	4,785 2,813	3,589 2,919 4,290	2,848	2,103 799	1,394	1,2
THOMAS JEFFERSON UNIV	5:095	4.740	3.001 1	4,290	1,445 2,363	2,149	774 355E	
TULANE UNIVERSITY	4,689	4,072	3,372 3,519	2,410 i	2.516	1,439 2,564	781	7
OREGON STATE UNIVERSITY UNIV OF MISSOURI COLUMBIA	4,6501	3,402	2,128	3,424 1,492	2,782 983	2,564 1,224	1,572 509	1,4
UNIV OF CAL DAVIS 1/	4,562 4,510 4,508	. 0	0 1	0 1	ا ۸	. 0 1	0 1	
UNIV ALABAMA BIRMINGHAM UNIVERSITY OF NEW MEXICO	4,508	3,705 3,875	3,117 3,523	2,265 3,0191	1,509	1,189 2,381	1,585 2,822	2,9
UNIVERSITY OF GEORGIA	4,360	3,729	4,356	4,486	3,059	2,630	2,076	1,9
TOTAL, 1ST 40 INSTS.	379,446	296,449	248,500	200,702	167,330	147,142	116,630	96,8
VANDERBILT UNIVERSITY U TEX HLTH SCI CTR S ANTO	4,356	3,376	3,040	2,403 2,237	2,146	2,013	1,890	1,4
UNIV OF CAL IRVINE 1/	4,302	3,458	2,497	0.1	1,495	1,077	722	4
UNIV OF CAL IRVINE 1/ U TEX HLTH'SCI CTR DALLAS	A 745 I	3,967	3,620 3,240	2,792	1,915	1,654 1,877	1,319	1,1
TEXAS TECH UNIVERSITY	4,292 4,213	3,742 3,650	3,240 2,077I	2,649 1,910	2,952 1,953	1,877 1,961	2,080	1,1
UNIV OF CAL SAN FRAN 1/	4,119	0 1	. 01	. 0 1	. 0 1	1,961	1,969	1,6
UNIVERSITY OF CONNECTICUT COLUMBIA UNIV MAIN DIV	4,090	4,572	3,537 349	1,743	1,570	1,10%	959	8
UNIV OF MASS AT AMHERST	4,071	3,096	2,627	336 2,018	1,601	479 964	364 413	6
TOTAL, 1ST 50 INSTS.	421,565	326,337	269,487	216,790	181,421	158,221	126,346	105.9

SEE FOOTNOTES AT END OF TABLE.



(DOLLARS IN THOUSANDS)

INSTITUTIONAL RANKING	1986	1985	1984	1983	1982	1981	1980	1979
51 BROWN UNIVERSITY 52 CALIFORNIA INST OF TECH 53 U TEX HITH SCI CTR HOUSTN 54 UNIVERSITY OF COLORADO 55 LCHIGH UNIVERSITY 56 UNIVERSITY OF DELAMARE 57 JOHNS HOPKINS UNIVERSITY 58 UNIV TENN CTR HEALTH SCI 59 BAYLOR COL OF MEDICINE 60 OKLAHOMA STATE UNIVERSITY	3,848 3,806 3,661 3,567 3,551 3,538 3,488 3,480 3,421I	3,000 2,678 1,217 2,234 2,508 2,809 3,076 2,379 4,241 2,972	2,227 3,798 883 1,865 2,752 0 2.206 3,932 2,631	1,527 2,445 707 1,542 1,488 3,075 2075 1,581 4,726 2,2831	2,236 2,025 848 2,860E 1,294 2,445 192 584 3,054 2,100	1,700 2,174 613 2,794E 1,167 2,246 38 514 2,927 2,446	1,293 1,293 2,674 1,076 2,1385 0 400 2,801 2,224	1,266 255 1,052 708 2,205 0 398E 1,127 1,154
TOTAL, 1ST 60 INSTS.	457,437	353,451	291,590	236,371	199,059	174,840	140,723	114,224
61 N MEX INST MINING & TECH 62 UNLY OF YT & ST AGRIC COL 63 INDIAMA UNIVERSITY 64 ROCKEFELLER UNIVERSITY 65 MORCESTER POLY INSTITUTE 66 DESERT RESEARCH INSTITUTE 67 UNIV OF PENNSYLVANIA 68 ARIZONA STATE UNIVERSITY 69 IOMA ST U OF SCI & TECH 70 CASE MESTERN RESERVE UNIV	3,335 3,331 3,325 3,321 3,2891 3,209 3,073 3,061 3,043 2,992	1,9421 2,613 2,718 2,861 2,9661 2,755 3,685 2,441 3,131 2,408	1,739 2,130 2,361 2,817 2,6641 2,585 3,013 1,588 2,925 1,802	8791 2,665 2,402 2,661 2,437 2,375 1,821 1,373 2,957 1,720	784 1,369 1,463 1,740 2,234 2,196 2,592 750 2,106 1,896	1,034 1,013 1,258 1,122 1,449 2,726 3,580 2,396 1,729	786 801 831 678 1,630 1,814 2,010 124 1,854 1,790	395 945 672 669 2,140 1,358 2,011 173 1,916 1,419
TOTAL, 1ST 70 INSTS.	489,416	380,971	315,214	256,661	216,189	191,432	153,041	125,922
71 PRINCETON UNIVERSITY 72 MICHIGAN STATE UNIVERSITY 73 CLEMSON UNIVERSITY 74 DREXEL UNIVERSITY 75 UNIV OF MAINE ORONO 76 U OF HOUSTON UNIV PARK 77 AUBURN UNIVERSITY 78 UNIVERSITY OF DAYTON 79 UNIVERSITY OF HOTRE DAME 80 UNIV OF TEXAS AT AUSTIN	2,989 2,969 2,963 2,940 2,856 2,851 2,805 2,786 2,743 2,677	1,184 2,686 1,800 2,237 1,559 1,925 2,699 2,556 2,502 2,136	958 2,446 2,009 1,562 2,320 1,500 2,604 2,226 1,874 1,932	805 619 2,223 611 1,404 1,239 1,904 2,108 1,237 1,750	693 2,200 2,319 542 1,088 1,472 1,560 1,793 1,076 1,624	557 2,411 2,098 487 1,087 2,286 1,266 9901 805 1,340	423 2,543 1,126 348 392 602 530 1,257 683 1,237	321 2,368 790 592 696 1,236 0 1,684 684 1,122
TOTAL, 1ST 80 INSTS.	517,995	402,255	334,645	270,561	230,556	204,759	162,182	135,415
81 UNIVERSITY OF IDAHO 82 RUTGERS THE ST UNIV OF MJ 83 UNIV OF ARK FAYETTEVILLE 84 COLORADO SCHOOL OF MINES 85 UNIVERSITY OF OKLAHOMA 86 MICHIGAN TECH UNIVERSITY 87 EMORY UNIVERSITY 88 MASHINGTON STATE UNIV 89 HORTHMESTERN UNIVERSITY 90 UNIVERSITY OF AKRON	2,670 2,594 2,585 2,516 2,513 2,490 2,426 2,256 2,256	2,793 2,108 2,093 2,201 2,328 2,511 2,395 1,465 1,690 1,056	2,567 1,817 1,391 2,356 2,075 1,901 2,395 1,581 1,088	2,260 1,694 1,514 1,609 2,260 1,453 1,957 1,517 1,365	1,622 1,264 1,402 900 1,642 1,673 1,271 2,865 895 411	1,001 979 1,048 1,175 1,470 1,642 1,042 1,320 601 282	301 1,008 1,186 497 647 2,064 867 795 290 186	246 807 807 4941 261 1,394 7,46 1,031 486 138
TOTAL, 1ST 90 INSTS.	542,563	422,395	352,662	286,512	244,5	215,319	170,023	141,825
91 BRIGHAM YOUNG UNIVERSITY 92 VIRGINIA COMMONHLTH UNIV 93 UNIV OF SOUTHERN CAL 94 OREGON GRADUATE CENTER 95 MONTANA STATE UNIVERSITY 96 UNIV OF CAL SANTA BARB 1/ 97 MISSISSIPPI STATE UNIV 98 BOSTON UNIVERSITY 99 UNIV OF CAL RIVERSIDE 1/ 100 UNIV OF NEBRASKA-LINCOLM	2,218I 2,195 2,175 2,147I 2,138 2,097 2,081 2,081 2,041 1,985	2,001 2,019 5,361 1,9371 1,628 0 1,606 1,994 0	1,787 1,412 4,800 1,732 1,818 0 1,250 906	1,207 350E 2,012 1,108I 1,054 0 1,229 812 0 1,203	1,328 299 5,223 1,0421 860 0 1,536 965 0	2,4461 49 5,853 922 1,097 0 628 39 0 762	2,198E 143 7,462 878 1,070 0 458 241 0 996	2,035 300 2,919 972 617 0 372 165 0 638
TOTAL, 1ST 100 INSTS.	563,716	441,162	367,912	295,487	256,791	227,115	183,469	149,843
TOTAL, ALL OTHER SAMPLED INSTS.	96,302	95,301	85,865	82,443	76,664	63,626	53,498	44,343
ESTIMATED T'ITAL NON-SAMPLED INSTS.	7,344	6,386	6,864	٥	0	o	0	0

^{1/} DATA FOR THE UNIV OF CALIFORNIA (UC) INCLUDE INDUSTRY SUPPORTED EXPENDITURES FOR THE FIRST TIME IN FY 1986. PRIOR YEARS' INDUSTRY DATA FOR UC ARE NOT AVAILABLE.

NOTE: A MUMBER OF INSTITUTIONS HAVE DEVELOPED OR ARE IN THE PROCESS OF DEVELOPING NEW COMPUTER SYSTEMS AND METHODOLOGIES HHICH ENABLE THEM TO REPORT MORE ACCURATELY THE TOTAL COST OF SCIENCE AND ENGINEERING RESEARCH. FY 1586 COMPARISONS WITH DATA REPORTED IN EARLIER YEARS MAY BE INAPPROPRIATE IN SOME AREAS.

NUMBERS FOLLOMED BY THE LETTER "E" ARE ESTIMATED; NUMBERS FOLLOMED BY "I" ARE IMPUTED. DASHES INDICATE THAT DATA ARE NOT AVAILABLE; DASHES FOLLOMED BY "C" INDICATE CONFIDENTIAL DATA.



TABLE 7. -- CURRENT FUND EXPENDITURES FOR RESEARCH EQUIPMENT AT UNIVERSITIES AND COLLEGES BY SCIENCE/ENGLÆERING FIELD AND SOURCE OF FUNDS: FISCAL YEARS 1241 AND 1985-86

(DULLARS IN THOUSANDS)

ETFLD		TOTAL			FEDERAL	l	H	DN-FEDERAL	
-167.0	1981	1985	1986	1981	1985	1986	1981	1985	1986
TOTAL	413,972	654,652	764,848	265,048	426,874	496,664	148,924	227,778	268,184
ENGINEERING, TOTAL	69,017	119,246	138,894	42,396	75,633	80,992	26,621	43,613	57,902
AERONAUTICAL AND ASTRONAUTICAL CHEMICAL CIVIL ELECTRICAL MECHANICAL UTHER, N.E.C.	2,570 7 019 5,036 18,377 9,694 26,021	6,516 10,850 10,444 31,179 16,259 43,998	7,336 13,226 11,935 34,221 16,913 55,262	2,097 4,436 2,772 13,262 5,695 14,134	5,460 6,339 6,505 21,242 10,359 25,728	5,813 7,655 6,472 22,393 9,940 28,720	773 2,583 2,264 5,115 3,999 11,887	1,057 4,511 3,939 9,938 5,900 18,269	1,523 5,571 5,463 11,829 6,973 26,542
ALL SCIENCES, TOTAL	344,955	535,406	625,954	222,652	351,241	415,672	122,303	184,165	210,282
PHYSICAL SCIENCES ASTRONOMY CHEMISTRY PHYSICS OTHER, N.E.C.	76,131 4,582 35,376 32,474 3,699	141,884 7,002 53,952 71,272 9,658	164,084 5,929 61,062 88,817 8,275	58,475 3,232 25,918 26,320 3,005	113,387 4,858 41,689 60,431 6,409	133,410 4,226 45,847 77,123 6,215	17,656 1,350 9,458 6,154 694	28,496 2,143 12,263 10,841 3,249	30,674 1,703 15,215 11,695 2,060
ENVIRONMENTAL SCIENCES	31,472 5,717 11,723 8,858 5,174	46,990 8,466 18,604 14,907 5,012	50,714 10,177 16,077 17,441 7,019	19,165 3,499 6,924 6,023 2,719	32,106 7,097 10,605 11,019 3,385	35,431 7,973 9,156 13,608 4,694	12,307 2,218 4,799 2,835 2,455	14,884 1,369 7,999 3,888 1,627	15,283 2,204 6,921 3,833 2,326
MATHEMATICAL SCIENCES	1,907	5,7 5 5	4,961	1,127	4,694	3,405	780	1,061	1,557
COMPUTER SCIENCES	10,896	38,667	46,549	5,436	32,709	39,226	5,460	5,958	7,323
LIFE SCIENCES	202,220 36,887 76,903 81,501 6,929	269,862 48,731 101,474 109,213 10,445	318,062 57,484 116,173 132,922 11,482	126,175 12,316 54,481 54,929 4,449	151,349 13,837 68,454 63,937 5,121	182,722 18,487 79,291 78,831 6,112	76,045 24,571 22,422 26,572 2,480	118,513 34,894 33,020 45,276 5,323	135,340 38,996 36,882 54.091 5,370
PSYCHOLOGY	6,019	8,465	9,018	4,466	6,160	6,055	1,553	2,305	2,963
SOCIAL SCIENCES ECONOMICS POLITICAL SCIENCE SOCIOLOGY OTHER, N.E.C.	9,155 1,858 1,516 2,554 3,227	8,929 2,591 1,067 1,846 3,426	12,152 3,233 1,071 1,832 6,015	3,999 525 756 1,478 1,240	3,903 932 357 1,136 1,479	3,779 1,056 294 847 1,583	5,156 1,333 760 1,076 1,987	5,026 1,659 710 710 1,947	8,373 2,177 778 985 4,433
OTHER SCIENCES, N.E.C	7,155	14,853	20,414	3,809	6,932	11,644	3,346	7,921	8,771



TABLE 8. -- CAPITAL EXPENDITURES AT UNIVERSITIES AND COLLEGES BY SCIENCE/ENGINEERING FIELD AND SOURCE OF FUNDS: FISCAL YEARS 1979-86 1/

(DOLLARS IN T.JOUSANDS)

FIELD	1979	1980	1981	1982	1983	1984	1985	1986
TOTAL	696,218	794,512	952,672	969,147	1,098,941	1,215,249	1,312,657	1,578,818
ENGINEERING	87,128	89,297	103,329	144,457	134,980	142,894	187,320	316,440
ALL SCIENCES, TOTAL PHYSICAL SCIENCES ENVIRONMENTAL SCIENCES MATHEMATICAL/COMPUTER	609,090 64,685 25,153	705,215 77,154 36,208	849,343 87,813 35,025	824,690 82.100 42,365		1,072,355 116,071 36,814	131,108	1,262,378 152,808 47,111
SCIENCES LIFE SCIENCES PSYCHOLOGY SOCIAL SCIENCES OTHER SCIENCES, N.E.C	27,282 428,293 7,060 21,358 35,259	32,318 459,057 17,982 35,073 47,423	30,517 597,635 10,991 45,138 42,224	34,328 590,353 12,798 30,797 31,949	i 40,870		75,657 751,646 20,900 61,849 30,125	50,711
FEDERAL SQURCES, TOTAL	164,460	149,563	153,800	116,651	131,517	141,728	144,296	193,120
ENGINEERING	20,927	20,438	17,601	18,136	16,163	24,013	16,778	33,635
ALL SCIENCES, TOTAL PHYSICAL SCIENCES ENVIRONMENTAL SCIENCES MATHEMATICAL/COMPUTER	143,533 32,186 8,220	129,125 22 463 8,033	136,199 25,529 6,866	98,515 20,154 4,404	115,354 18,5;9 3,644	18,916	127,519 31,300 3,547	159,485 35,089 6,184
SCIENCES LIFE SCIENCES PSYCHOLOGY SOCIAL SCIENCES OTHER SCIENCES, N.E.C	2,983 90,796 1,740 2,076 5,532	5,653 86,105 2,002 1,528 3,341	4,944 89,410 1,580 6,376 1,494	3,798 66,004 1,023 1,374 1,758	4,458 81,016 1,365 4,959 1,333	5,296 85,412 1,008 2,932 660	6,718 80,829 820 2,096 2,209	14,048 94,310 1,266 2,505 6,082
OTHER SOURCES, TOTAL	531,758	644,949	798,872	852,496	967,424	1,073,521	1,168,261	1,385,698
ENGINEERING	66,201	68,859	85,728	126,321	118,817	118,881	170,542	282,805
ALL SCIENCES, TOTAL PHYSICAL SCIENCES ENVIRONMENTAL SCIENCES MATHEMATICAL/COMPUTER	465,557 32,499 16,933	576,090 54,691 28,175	713,144 62,284 28,159	726,175 61,946 37,961	848,607 78,888 37,468	\$54,640 97,154 33,324	99,808	1,102,893 117,719 40,927
SCIENCES LIFE SCIENCES PSYCHOLOGY SOCIAL SCIENCES OTHER SCIENCES, N.E.C.	24,299 337,497 5,320 19,282 29,727	26,665 372,952 15,980 33,545 44,082	25,573 508,225 9,411 38,762 40,730	30,530 524,349 11,775 29,423 30,191	48,640 597,762 15,647 35,911 34,291	44,675 656,004 34,197 49,001 40,286	68,939 670,817 20,080 59,753 27,916	77,040 745,596 24,206 48,206 49,200

 $[\]ensuremath{\mathbf{1}}/$ Includes expenditures for facilities and equipment for research, development, and instruction.



TABLE 9. -- FEDERAL OBLIGATIONS TO UNIVERSITIES AND COLLEGES BY TYPE OF ACTIVITY: FISCAL YEARS 1963-86 1/

(DOLLARS IN THOUSANDS)

				ACADEMIC	SCIENCE/ENGI	NEERING			
FISCAL YEAR	OBLIGATIONS	TOTAL ACADEMIC SCIENCE/ ENGINEERING	RESEARCH AND DEVELOPMENT	R&D PLANT	FACILITIES FOR INSTRUCTION IN SCIENCE & ENGINEERING	FELLOM- SHIPS. TRAINEE- SHIPS. & TRAINING GRANTS	GENERAL SUPPORT FOR SCIENCE/ ENGINEERING	OTHER SCIENCE/ ENGINEERING ACTIVITIES	NON-SCIENCE/ ENGINEERING ACTIVITIES
1963	1,413,015	1,328,511	829,524	105,896	(2)	(2)	(2)	393,091	84,504
1964	1,624,963	1,528,604	975,597	100,837	(2)	(2)	(2)	452,170	96,359
1965	2,305,455	1,816,171	1,094,963	126,196	(2)	(2)	(2)	595,012	489,284
1966	3,009,950	2,163,504	1,252,146	114,767	(2)	365,560	(2)	431,031	846,446
1967	3,317,709	2,323,795	1,301,242	111,309	(2)	447,236	(2)	464,008	993,914
1968	3,386,637	2,349,817	1,398,305	96,148	(2)	440,895	(2)	414,469	1,036,820
1969	3,462,370	2,361,399	1,474,681	54,516	(2)	436,270	(2)	395,932	1,100,971
1970	3,236,612	2,187,579	1,446,618	44,778	(2)	429,408	(2)	266,775	1,049,033
1971	3,498,596	2,343,129	1,551,391	29,942	28,729	421,029	99,669	212,369	1,155,467
1972	4,144,570	2,598,989	1,852,963	36,917	26,341	367,888	83,288	211,592	1,545,581
1973	3,839,102	2,464,362	1,870,690	43,338	13,372	287,210	38,964	210,788	1,374,740
1974	4,480,372	2,736,984	2,085,204	29,009	3,506	326,600	86,974	205,691	1,743,388
1975	4,547,191	2,805,783	2,246,088	44,787	5,026	201,273	46,353	262,256	1,741,408
1976	5,402,764	2,959,656	2,430,970	23,899	3,210	174,871	74,483	252,223	2,443,108
1977	6,489,735	3,351,337	2,803,017	36,471	3,282	184,671	75,928	247,968	3,138,398
1978	7,471,843	3,959,832	3,385,770	34,328	4,906	205,925	74,398	254,505	3,512,011
1979 3/	7,603,908	4,472,659	3,873,514	32,068	6,743	204,866	92,483	262,985	3,131,249
1980	8,298,118	4,790,286	4,159,857	37,780	3,776	210,121	91,541	287,211	3,507,832
1981 3/	8,640,193	5,062,124	4,410,199	27,694	4,563	205,448	92,721	321,499	3,578,069
1982 3/	8,776,258	5,178,890	4,553,755	31,200	829	176,582	80,137	336,387	3,597,368
1983 3/	9,340,970	5,679,978	5,023,677	37,547	2,522	189,616	94,847	331,769	3,660,992
1984	10,118,460	6,389,968	5,634,400	49,764	1,889	194,875	112,588	396,432	3,728,492
1985	10,959,609	7,249,486	6,368,608	113,932	4,947	253,082	119,171	389,746	3,710,123
1986	11,584,087	7,399,121	6,538,280	105,827	4,990	246,196	111,130	392,698	4,184,966

^{1/} NOTE THAT SOME TREND SHIFTS ARE RELATED TO INSTITUTIONAL
RECLASSIFICATION. AS OF 1978, THO LABORATORIES MHICH MERE FORMERLY
CONSIDERED ACADEMICALLY ADMINISTERED FEDERALLY FUNDED RESEARCH AND
DEVELOPMENT CENTERS (FROC'S) BECAME PART OF THEIR RESPECTIVE
INSTITUTIONS: APPLIED PHYSICS LABORATORY (JOHNS HOPKINS UNIVERSITY)
AND APPLIED RESEARCH LABORATORY (PENNSYLVANIA STATE UNIVERSITY).
DATA FOR THESE LABORATORIES ARE THUS INCLUDED IN THE ACADEMIC
FIGURES FOR 1978-86, BUT EXCLUDED FOR PRIOR YEARS. SIMILARLY,
DRAPER LABORATORIES SEPARATED FROM THE MASSACHUSETTS INSTITUTE OF
TECHNOLOGY AS OF FISCAL YEAR 1974 TO BECOME AN INDEPENDENT
NONPROFIT INSTITUTION; ACADEMIC DATA SHOWN FOR 1963-73 INCLUDE
DRAPER LABORATORIES, MHILE THOSE FOR 1974-86 DO NOT.



^{2/} NOT SEPARATELY IDENTIFIED BU) INCLUDED UNDER "OTHER SCIENCE/ ENGINEERING ACTIVITIES".

^{3/} TOTAL AND NON-SCIENCE/ENGINEERING OBLIGATIONS MERE ESTIMATED BASED ON REVISED DATA FROM THE DEPARTMENT OF EDUCATION.

TABLE 10. -- FEDERAL OBLIGATIONS TO THE 100 UNIVERSITIES AND COLLEGES RECEIVING THE LARGEST AMOUNTS BY TYPE OF ACTIVITY: FISCAL YEAR 1986

(DOLLARS IN THOUSANDS)

				ACADENTO :	SCTENCE/ENG	THEFRING			
INSTITUTION (RANKED RANK BY TOTAL FEDERAL OBLIGATIONS)	TOTAL, ALL ACTIVI- TIES	TOTAL ACADEMIC SCIENCE/ ENGI- NEERING	RESEARCH AND DEVELOP- MENT	R&D PLANT	SCIENCE/ENG FACILITIES FOR INSTRUC- TION IN SCIENCE/ ENG.	FELLOW- SHIPS, TRAINEE- SHIPS, AND TRAINING GRANTS	GENERAL SUPPORT SCIENCE/ ENGI- NEERING	OTHFR SCIENCE/ ENGI- HEERING	NON- SCIEHCE/ ENGI- NEERING
TOTAL, ALL INSTITUTIONS	11,584,067	7,399,121	6,538,280	105,827	4,990	246,196	111,130	392,698	4,184,966
1 JOHNS HOPKINS UNIVERSITY 2 MASS INST OF TECHNOLOGY 3 STANFORD UNIVERSITY 4 UNIVERSITY OF MASHINGTON 5 HOMARD UNIVERSITY	465,453 212,360 201,452 176,210 169,084	457,525 207,867 195,454 157,154 14,200	445,718 188,120 180,186 146,718 9,497	10,499 3,743 443 1,799	0 0 10 0	10,075 7,260 9,866 7,745 849	1,609 859 900 1,744 1,957	1,129 749 504 98	7,328 4,493 5,998 21,056 154,884
6 CORKELL UNIVERSITY 7 COLUMBIA UNIV MAIN DIV 8 UNIV OF CAL LOS ANGELES 9 UNIV OF CAL SAN DIEGO 10 UNIV OF MIS-MADISON	160,138 157,769 149,345 147,381 143,693	149,599 142,430 133,150 140,878 132,827	112,707 127,131 125,483 133,243 120,626	8,879 8,232 193 1,526 1,657	0 0 0	4,425 5,575 5,255 5,147 4,793	1,220 1,125 1,810 887 1,361	22,368 367 409 75 10,390	10,539 15,339 16,195 6,503 4,866
TOTAL 1ST 10 INSTITUTIONS	1,984,885	1,737,084	1,589,429	37,016	10	60,990	13,472	36,167	247,801
11 UNIVERSITY OF MINNESOTA 12 UNIVERSITY OF MICHIGAN 13 HARVARD UNIVERSITY 14 YALE UNIVERSITY 15 UNIV OF CAL BERKELEY	138,970 135,186 133,226 129,700 126,380	114,473 120,168 125,127 123,849 104,958	100,898 111,232 110,356 111,687 96,834	30 576 965 706 0	77 16 0 0	3,746 5,950 11,919 9,143 6,996	1,448 1,509 1,036 1,617 546	8,274 885 851 696 582	24,497 15,018 8,099 5,851 21,422
16 UNIV OF PENNSYLYANIA 17 PENNSYLVANIA STATE UNIV 18 UNIV OF CAL SAN FRANCISCO 19 UNIV OF ILL URBANA 20 OHIO STATE UNIVERSITY	124,219 123,708 119,318 104,040 96,119	112,305 99,665 113,828 103,091 78,746	103,487 87,041 104,453 88,986 58,078	269 0 214 100 0	0000	6,926 1,009 7,525 1,509 715	1,421 703 1,036 440 811	202 30,912 600 12,056 19,142	11,914 24,043 5,490 949 17,373
TOTAL 1ST 20 INSTITUTIONS	3,215,751	2,833,294	2,562,481	39,876	103	116,428	24,039	90,367	382,457
21 UNIVERSITY OF COLORADO 22 UNIV OF SOUTHERN CAL 23 MASHINGTON UNIVERSITY 24 UNIVERSITY OF CHICAGO 25 NEM YORK UNIVERSITY	92,702 92,411 83,777 83,262 82,870	78,496 80,145 80,206 78,988 71,596	73,630 77,533 72,750 71,535 68,372	255 66 0 0 96	41 0 0 0 0	3,386 1,518 6,659 7,036 2,699	882 694 797 417 429	302 334 0 0	14,206 12,266 3,571 4,274 11,274
26 DUKE UNIVERSITY 27 UNIVERSITY OF ROCHESTER 28 UNIV OF NC AT CHAPEL HILL 29 UNIVERSITY OF PITTSBURGH 30 UNIV OF TEXAS AT AUSTIN	81,777 80,507 80,459 79,116 77,483	77,301 76,589 75,475 63,125	70,034 71,521 70,526 59,373 74,028		0000	5,000 2,667 4,057 1,729 935	1,057 864 862 1,442 528	590 0 30 398 597	4,476 3,918 4,984 15,991 1,195
TOTAL 1ST 30 INSTITUTIONS	4,050,115	3,591,503	3,271,783	42,833	144	152,114	32,011	92,618	458,612
31 MICHIGAN STATE UNIVERSITY 32 UNIVERSITY OF FLORIDA 33 INDIANA UNIVERSITY 34 UNIVERSITY OF UTAH 35 UNIVERSITY OF IOMA	74,979 74,267 70,589 69,102 68,092	59,788 58,358 44,819 57,470 56,724	48,740 48,911 41,879 55,290 52,226	274 523 0 45 441	0 0 19 0 0	1,361 1,374 1,108 3,157	801 811 750 677 749	9,320 6,752 797 350 151	15,191 15,909 25,770 11,632 11,368
36 UNIY OF MD COLLEGE PARK 37 PURDUE UNIVERSITY 38 UNIVERSITY OF ARIZONA 39 BOSTON UNIVERSITY 40 NORTHMESTERN UNIVERSITY	67,514 67,088 67,009 66,327 65,264	56:212	53,906 46,827 51,123 48,518 43,609	425	00000	523 871 1,374 2,076 1,950	137 451 1,065 775 1,089	4,262 8,850 2,650 45	8,416 9,664 10,797 14,913 8,484
TOTAL 1ST 40 INSTITUTIONS	4,740,346		1 ' '	1	163	166,561	39,316	125,795	590,756
41 CARNEGIE-HELLON UNIV 42 YESHIYA UNIVERSITY 43 CALIFORNIA INST OF TECH 44 GEORGIA INSTITUTE OF TECH 45 TEXAS A & H UNIVERSITY	65,186 64,261 63,519 62,961 61,857	61,083 62,867 63,519 56,323 53,341	59,854 58,518 59,707 46,557 35,891	100 0 459 0 389	0 0 50 50	724 3,806 2,902 135 394	148 543 236 369 588	257 0 215 9,212 16,079	4,103 1,394 0 6,638 8,516
46 GALLAUDET COLLEGE 47 UNIV ALABAHA BIRMINGHAM 48 CASE MESTERN RESERVE UNIV 49 INTER AM U PR-SAN GERMAN 50 U P R - REGIONAL COL ADMN	60,378 60,210 57,817 57,145 56,446	2,800 49,732 53,392	· ·) 0	000000000000000000000000000000000000000	38 2,420 3,262 0 0	1,253 781 0	0 0 18 0 0	57,578 10,478 4,425 57,145 56,446
TOTAL 1ST 50 INSTITUTIONS	5,350,126	4,552,647	4,121,288	56,094	213	180,242	43,234	151,576	797,479
		<u> </u>		·					

SEE FOOTNOTES AT END OF TABLE.



TABLE 10. -- FEDERAL DBLIGATIONS TO THE 100 UNIVERSITIES AND COLLEGES RECEIVING THE LARGEST AMOUNTS BY TYPE OF ACTIVITY: FISCAL YEAR 1986

CONTINUED

(DOLLARS IN THOUSANDS)

TOTAL ACADEMIC RESEARCH R&D FACILITIES SCIENCE SUPPORT SCIENCE SCIEN	NON- SCIENCE/ ENGI- NEERING
51 NEH MEXICO STATE UNIV 54,855 47,228 39,297 0 0 131 565 7,239 52 UNIV OF CAL DAYLS 54,182 45,798 43,618 85 0 1,520 435 144	7,627
51 NEH MEXICO STATE UNIV 54,855 47,228 39,297 0 0 1,520 435 7,238 52 UNIV DF CAL DAVIS 54.182 45.798 43,618 85 0 1,520 435 144 55 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8,384 9,230 3,048 12,689
56 UNIVERSITY OF MIAMI 49,347 39,624 37,618 512 0 1,083 329 8. 57 PRINCETON UNIVERSITY 48,805 46,084 42,674 398 0 2,556 456 58 UNIVERSITY OF VIRGINIA 48,736 42,798 39,136 0 0 2,926 735 59 UNIVERSITY OF GEORGIA 48,437 43,022 32,267 237 0 270 148 10,10 60 BAYLOR COL OF MEDICINE 48,191 46,904 43,801 543 0 1,647 636 27	5,415 1,287
TOTAL 1ST 60 INSTITUTIONS 5,852,571 4,990,030 4,515,733 58,440 213 193,531 48,703 173,41	1
61 UNIVERSITY OF KENTUCKY 47,943 32,564 22,394 0 0 329 358 9,488 62 LOUISIANA STATE UNIV 46,322 39,336 30,986 0 0 533 816 7,00 63 U TEX HITH SCI CTR DALLAS 46,132 43,274 40,330 0 0 2,030 687 22 64 N C STATE UNIV AT RALEIGH 45,791 41,010 27,482 0 0 532 122 12,87 65 IDMÁ ST U OF SCI & TECH 43,472 30,373 21,207 0 0 183 475 8,50	6,986 2,858 4,781 13,099
66 UNIV OF MASS AT AMHERST 43,338 30,070 26,190 0 0 383 107 3,39 67 UNIVERSITY OF CONNECTICUT 43,285 37,018 32,604 0 0 1,281 888 2,24 68 UNIV OF CAL INVINE 42,356 35,662 33,607 129 0 1,349 570 68 UNIV OF CAL INVINE 42,356 35,662 33,607 29,209 0 0 0 485 628 56	
TOTAL 1ST 70 INSTITUTIONS 6,294,985 5,341,606 4,809,512 58,569 213 201,560 54,042 217,71	953,379
71 SUNY AT STONY BROOK 39,805 37,616 36,102 0 0 892 622 72 BROWN UNIVERSITY 39,719 36,090 29,987 4,961 0 555 497 8 73 RUTGERS THE ST UNIV OF NJ 39,688 28,227 23,092 0 0 546 887 3,707 74 UNIV OF MISSOURI COLUMBIA 39,373 31,714 21,997 0 0 652 270 8,79 75 UNIV OF HAMAII-MANDA 38,815 31,981 27,758 991 0 323 767 2,14	11,461 7,659
76 CDL GRADG STATE UNIVERSITY 38,221 31,814 27,303 0 0 810 379 3,32 77 PUERTO RICO JR CDL 38,023 37,318 37,318 37,318 36,300 1,018 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	38,023 0 4,179
TOTAL 1ST 80 INSTITUTIONS 6,679,536 5,638,590 5,071,912 65,588 213 206,212 58,903 235,76	1,040,946
B1 VA POLYTECH INST & ST U 36,505 32,327 23,363 100 0 168 109 8,58 82 UNIVERSITY OF OREGON MAIN 36,229 22,424 13,004 8,179 0 550 691 83 YIRGINIA COMMONHLIH UNIV 36,164 28,429 26,598 0 0 1,247 584 85 ROCKEFELLER UNIVERSITY 35,755 35,755 33,940 0 0 1,512 303 85 ROCKEFELLER UNIVERSITY 35,653 1,447 1,397 0 50 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	7 4,178 13,895 7,735 0 0 34,206
86 U TENNESSEE KNOXVILLE 34,565 25,995 15,497 0 0 705 21 2,2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	8,570 10,424 3 9,681 18,043 0 13,314
TOTAL 1ST 90 INSTITUTIONS 7,028,080 5,867,178 5,259,247 76,175 263 212,906 61,949 256,6	1
91 CUFY HT SIMAI SCH OF MED 32,198 30,872 28,963 0 0 1,129 539 2 7 TUFTS UNIVERSITY 31,226 28,427 27,475 0 0 467 459 93 OKL AHOMA STATE UNIVERSITY 30,798 24,275 14,127 0 0 211 13 9,9 10 10 10 10 10 10 10 10 10 10 10 10 10	6 2,799 6,523 1 5,617 9 7,745
96 UNIV OF MD BALT PROF SCH 28,961 26,450 24,574 0 0 427 637 8 97 MAYNE STATE UNIVERSITY 28,395 17,172 15,015 51 0 858 1,448 9	0 11,223 2 3,450 1 6,297
TOTAL 1ST 100 INSTITUTIONS 7,323,191 6,108,157 5,464,889 76,226 263 217,709 56,142 282,9	8 1,215,034



TABLE 11. -- FEDERAL OBLIGATIONS FOR RESEARCH & DEVELOPMENT TO THE 100 UNIVERSITIES AND COLLEGES RECEIVING THE LARGEST AMOUNTS BY AGENCY: ! (SCAL YEAR 1986 1/

RANK			ON (RANKED BY RECEIVED)	TOTAL	USDA	COM	D Q D	ED	D O E	EPA	ннѕ	INT	NASA	NSF	OTHER 2/
	TOTAL,	ALL	INSTITUTIONS	6,538,280	277,126	68,281	1,149,664	72,202	346,928	67,945	3,212,140	40,860	254,027	983,933	65,174
4	MASS I STANFO UNIVER	NST RD U Sity	INS UNIVERSITY OF TECHNOLOGY NIVERSITY OF MASHINGION L SAN DIEGO	445,718 188,120 180,186 146,718 133,243	137 0 305 1,347 195	2,337 0 4,071 1,831	318,504 46,940 40.846 20,827 33,174	1,303 141 155 886 0	2,699 44,938 14.090 5,807 1,925	528 352 1,135 970 89	110,451 43,593 81,052 86,273 57,946	144 700 57 615 537	3,396 12,356 17,936 3,598 8,674	8,388 36,083 24,610 22,314 28,872	680 10
9	UNIV D	F CA F MI: L UN	NIV MAIN DIV L LOS ANGELES S-MADISON IVERSITY RSITY	127,131 125,483 120,626 112,707 111,687	382 8,197 7,801 12	215 259 1,857 67 0	11,279 9,075 6,950 10,622 6,085	2,440 0 0 165	4,765 13,754 10,508 3,648 7,320	0 854 679 1,084	77,837 78,188 63,259 51,373 88,315	1,576 52 268 789 0	2,704 4,483 8,777 2,798 791	25,830 15,996 20,131 34,525 8,999	2,824 0 0
TOT	AL 1ST	10	INSTITUTIONS	1,691,619	18,376	10,805	504,302	5,191	109,454	5,691	738,287	4,738	65,513	225,748	3,514
12	HARVAR	יווו ח	DF MICHIGAN IVERSITY L SAN FRANCISCO NNSYLVANIA DF MINNESOTA	111,232 110,356 104,453 103,487 100,898	433 160 0 420 6,249	1,200 427 0 0 713	8,117 8,323 3,346 6,305 3,525	1,869 1,971 540 79 1,234	4,408 4,238 2,232 5,073 4,722	1,127 391 0 0 1,830	63,628 76,656 95,958 77,631 66,285	10 167 0 0 499	10,865 2,245 753 362 1,586	18,896 14,686 1,624 13,461 14,245	679 592 0 156 10
19	UNIV O	r sol	L BERKELEY L URBANA IA STATE UNIV JTHERN CAL KAS AT AUSTIN	96,834 88,986 87,041 77,533 74,028	7,005 6,934 7,191 4	83 68 257 936 0	15,590 14,353 38,925 14,045 39,223	800 0 338 0 117	2,786 9,360 2,937 1,532 7,661	347 419 258 164 1,007	32,916 15,930 21,827 50,930 9,377	517 414 3,111 430 224	9,683 2,527 2,746 982 3,429	25,820 35,955 9,156 8,500 12,560	1,287 3,026 295 10
TOT	AL 1ST	20	INSTITUTIONS	2,646,467	47,202	14,489	656,054	12, 139	154,403	11,734	1	10,110	100,691	380,651	9,569
22 23 24	HASHING UNIVER UNIVER	STON SITY SITY	OF COLORADO UNIVERSITY OF CHICAGO OF ROCHESTER AT CHAPEL HILL	73,630 72,750 71,535 71,521 70,526	240 215 0 58	4,123 0 88 0 80	4,989 869 1,440 5,012 3,510	101 0 79 300 0	2,798 1,056 3,432 11,746 845	612 51 0 275 2,553	39,441 64,287 45,407 46,540 56,758	291 0 0 0	9,531 2,229 5,573 154 363	11,695 4,018 15,151 7,403 6,159	40 0 150 91 200
27 28	CARNEG	RK ÚI	RSITY NIVERSITY ELLON UNIV INST OF TECH OF PITTSBURGH	70,034 68,372 59,854 59,707 59,373	402 0 0 145 0	61 0 42 156 125	2,586 4,081 36,281 11,591 3,848	1,598 0 0 1,477	2,279 4,748 3,547 7,881 1,825	1,567 896 107 209 907	56,056 45,547 5,215 9,879 43,793	9 0 159 1,764 0	473 499 545 5,958 588	6,601 6,428 13,600 22,124 6,814	4,575 358 0
TOT	AL 1ST	30	INSTITUTIONS	3,323,769	48,271	19,164	730,261	15,694	194,560	18,507		12,333	126,604	480,644	14,983
32 33	UNIVER	TATE	IVERSITY UNIVERSITY OF UTAH COLLEGE PARK OF IOMA	58,518 58,078 55,290 53,906 52,226	6,863 125 2,614 111	581 0 3,210 41	0 4,906 5,809 13,919 3,178	1,323 5,400 216 2,174 265	2,322 4,816 5,045 77	990 312 249 594	56,330 19,561 35,346 3,272 40,254	0 379 1,060 189 144	7,509 7,693 4,001	865 10,167 7,087 14,741 3,561	4,400 800
37 38 39	CASE MI Univer:	ESTEI Sity NN Si	OF ARIZONA RN RESERVE UNIV OF FLORIDA TATE UNIVERSITY PERSITY	51,123 49,331 48,911 48,740 48,518	3,085 531 8,075 7,621 145	399 38 2,260 42 0	5,010 3,829 6,796 2,060 5,183	678 325 74 2,571 1,153	734 680 2,648 2,792 738	1,040 167 902 484 103	23,830 34,163 21,024 13,367 37,284	583 10 634 221 0	6,037 4,630 989 467 431	9,255 4,198 5,509 14,224 3,481	472 760 0 4,891
TOT	AL 1ST	40	INSTITUTIONS	3,848,410	77,441	25,735	780,9 5 1	29,873	214,412	23,748	1,946,779	15,553	153,880	553,732	26,306
42 43 44	UNIV AI VANDERI	N INS Abab Bilt	VERSITY STITUTE OF TECH A BIRMINGHAM UNIVERSITY OF MEDICINE	46,827 46,557 45,856 43,990 43,801	5,515 0 338 0 100	111 188 0 0 0	6,776 34,100 698 1,146 1,015	207 0 1,325 717 824	3,814 1,161 0 444 0	225 918 0 251 50	13,343 2,009 40,830 37,893 41,183	256 554 0 80 0	1,875 2,076 1,787 1,391 285	14,695 3,776 878 2,068 344	1,775 0 0
47 48 49	PRINCET INDIAN	STEF ON L Uni	DAVIS N UNIVERSITY UNIVERSITY VERSITY SCI CTR DALLAS	43,618 43,609 42,674 41,879 40,330	4,067 200 6 125 0	0 89 395 0	2,024 4,034 10,064 1,688 94	1,764 0 154 0	4,054 2,720 4,778 2,318 0	229 40 0 230 0	22,144 24,068 9,658 23,064 30,805	335 0 0 67 0	843 456 2,981 461 1,027	6,792 10,210 14,731 13,752 404	2,580 28 67 20
TOT	AL 1ST	50	INSTITUTIONS	4,287,551	87,786	26,518	842,590	35,414	233,701	25,691	2,199,781	16,845	167,062	621,382	30,781

SEE FODTNOTES AT END OF TABLE.



TABLE 11. -- FEDERAL OBLIGATIONS FOR RESCA CH & DEVELOPMENT TO THE 100 UNIVERSITIES AND COLLEGES RECEIVING THE LARGEST ANDUHTS BY AGENCY: FISCAL YEAR 1986 1/

(DOLLARS IN THOUSANDS)

											—		
PANK	INSTITUTION (RANKED BY AMOUNT RECEIVED)	TOTAL	USDA	COM	DOD	ED	DOE	EPA	HHS	INT	NASA	NSF	OTHER 2/
51 52 53 54 55	UNIVERSITY OF MIAMI OREGON STATE UNIVERSITY	39,297 39,136 37,618 37,097 36,300	3,336 112 80 7,787	0 1,701 790 4,800 981	26,376 2,385 3,451 4,922 15,825	2,067 73 0	1,237 2,231 2,23 546 565	220 371 0 1,651 189	1,439 24,379 25,764 6,536 195	432 30 0 1,081 436	5,035 1,148 844 728 118	1,214 4,712 6,393 7,606 17,991	0 0 0 0 1,440 0
59	SUNY AT STONY BROOK TEXAS A & M UNIVERSITY UNIVERSITY OF NEW MEXICO ROCKEFELLER UNIVERSITY UNIV OF CAL IRVINE	36,102 35,891 34,947 33,940 33,607	9,007 0 90 126	2,076 2,028 0 0	817 5,898 22,356 658 4,025	ა 30 0 0	2,768 2,623 1,435 1,142 2,872	397 0 72 362	17,085 5,141 8,724 30,543 17,822	285 0 0 0	1,579 526 112 1,000	12,514 8,237 1,906 1,323 7,400	666 0 0
TG	TAL 1ST 60 INSTITUTIONS	4,651,486	108,324	38,894	929,303	37,584	249,343	28,961	2,337,409	19,109	178,994	690,678	32,887
62 63 64	UNIVERSITY OF CONNECTICUT UNIVERSITY OF GEORGIA LOUISIANA STATE UNIVERSITY BROWN UNIVERSITY	32,604 32,267 20,986 30,981 29,987	1,288 5,543 4,132 0 80	2,006 1,200 749 0 205	1,759 988 3,521 668 6,512	750 0 0 700 0	428 7,703 1,160 147 2,697	1,209 835 0 0	23,548 6,635 16,702 28,022 9,621	124 77 897 0 209	207 150 186 149 1,390	2,182 6,362 2,755 1,295 9,273	2,400 49 0
67 68 69	UNIVERSITY OF CINCINNATI UNIV OF ILL CHICAGO CUNY MT SINAI SCH OF MED UNIV OF CAL SANTA BARBARA UNIV OF HAMAII-MANDA	29,770 29,209 28,963 28,880 27,758	0 130 0 115 3,059	0 46 0 0 2,531	1,503 4,752 0 8,603 1,643	49 239 0 762 799	301 749 77 2,947 1,390	1,474 451 416 574 0	23,422 22,470 27,969 3,489 5,590	0 0 0 280 114	856 209 50 980 4,485	2,165 126 451 10,802 7,177	0 37 0 328 970
TO	TAL 1ST 70 INSTITUTIONS	4,952,891	122,671	45,631	959,252	40,883	266,942	34,232	2,504,877	20,810	187,656	733,266	36,671
72	N C STATE UNIV AT RALEIGH TUFTS UNIVERSITY COLORADO STATE UNIVERSITY VIRGINIA COMMONMLTH UNIV UNIV OF MASS AT AMHERST	27,482 27,475 27,303 26,598 26,190	7,813 159 4,026 0 2,646	1,197 0 1,441 0 0	5,242 616 3,083 1,239 8,707	0 0 0 627 177	1,019 954 1,172 102 1,345	825 2,731 1,412 21 60	2,820 21,287 6,440 23,626 3,261	207 40 642 0 180	847 113 994 337 523	4,877 1,487 7,493 646 9,141	2,635 88 600 0 150
76 77 78 79 80	RUTGERS THE ST UNIV OF HJ SUNY AT BUFFALO	24,574 23,363 23,092 22,668 22.612	5,008 2,993 0 90	0 75 185 0 54	1,560 5,133 1,946 1,648 21,297	0 0 1,323 0 0	268 2,650 362 526 153	415 236 0 0	22,454 2,211 8,860 15,920 70	1,807 352 0 0	0 2,221 101 417 531	292 3,234 6,619 4,157 405	0 609 115 0 12
TO	TAL 1ST 80 INSTITUTIONS	5,204,248	145,406	48,583	1,009,723	43,010	275,493	39,932	2,611,826	24,038	193,740	771,617	40,880
82 83 84	U TEX HLTH SCI CTR HOUSTN UNIVERSITY OF KENTUCKY UNIV OF MISSOURI COLUMBIA UNIV OF YT & ST AGRIC COL UTAH STATE UNIVERSITY	22,588 22,394 21,997 21,967 21,812	5,523 6,096 1,888 2,416	0 80 423 0 3	401 977 1,020 538 12,408	0 227 0 839 600	260 435 - 604 169 88	106 206 179 162 847	20,956 11,585 9,630 17,192 802	0 256 114 131 645	865 170 0 7 1,420	2,848 2,171 1,041 2,258	0 87 1,760 0 325
87 88 89	IOHA ST U OF SCI & TECH	21,504 21,418 21,207 20,576 20,183	0 21 6,69; 0 187	0 485 90 0 175	579 2,054 7,260 0 2,070	0 166 0 1,716	9,757 585 0 334	277 247 247 0 317	20,385 3,025 2,373 20,369 12,278	0 0 321 0 0	564 338 0 886	5,234 5,234 3,132 207 2,147	0 0 0 0 73
TO	TAL 1ST 90 INSTITUTIONS	5,419,894	168,232	49,839	1,037,030	46,559	287,725	42,273	2,730,421	25,505	197,990	791,195	43,125
92	U MASS MED SCHL MORCESTER DARTMOUTH COLLEGE MAKE FOREST UNIVERSITY U TEX MED BRUCH GALVESTON TEMPLE UNIVERSITY	19,306 17,480	0	0 0 0 0		0 0 0 83 361	101 424 90 0 330	128	18,068 13,597 16,445 16,251 14,721	0000	212 248	373 2,354 551 244 1,395	0 25 0 0 0
96 97 98 99	U TENNESSEE KNOXVILLE SUNY AT ALBANY	17,041 16,359 15,497 15,443 15,023	7,128 0 4,584 64 223	78 0 0 41	2,076	101 906 0 0	1,648	491 3.005	4,168 10,712 3,265 4,617	159 0 114 0	1,017	3,144 1,375 2,191 3,520 1,008	0 29 111 85 0
	TAL 1ST 100 INSTITUTIONS	5,590,698	180,671	49,958	1,050,532	48,010	291,334	47,040	2,843,883	25,778	202,767	807,350	43,375

 $^{1^{\}prime}$ DOES NOT INCLUDE R&D OBLIGATIONS TO UNIVERSITY-ASSOCIATED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CEMTERS (FFRUC'S).



^{2/} INCLUDES DOT, AID, HUD, LABOR, AND NRC.

TABLE 12. -- FEDERAL OBLIGATIONS TO UNIVERSITIES AND COLLEGES FOR RESEARCH AND DEVELOPMENT BY GEOGRAPHIC DIVISION AND STATE: FISCAL YEARS 1979-86

(DOLLARS IN THOUSANDS)

GEOGRAPHIC DIVISION AND STATE	1979	1980	1981	1982	1983	1984	1985	1986
UNITED STATES, TOTAL	3,873,514	4,159,857	4,410,199	4,553,755	5,023,677	5,634,400	6,368,608	6,538,280
NEW ENGLAND, TOTAL	420, 133	486,294	514,219	546,699	614,331	666,700	728,414	747,833
CONNECTICUT MAINE MASSACHUSETTS NEM HAMPSHIRE RHODE ISLAND VERMONT	83,995 3,837 279,697 14,917 25,746 11,941	90,055 4,769 332,727 17,780 28,742 12,221	97,599 5,316 354,577 17,283 27,351 12,093	106,115 5,409 373,011 16,958 32,156 13,049	116,971 6,476 424,213 19,436 33,879 13,356	128,786 7,999 453,875 22,409 35,219 18,412	144,455 7,166 487,618 27,750 42,131 19,294	146,545 6,449 454,399 30,564 43,646 22,230
MIDDLE ATLANTIC, TOTAL	638,048	702,123	715,602	758,311	863,889	941,878	1,108,296	1,130,986
NEH JERSEY NEH VORK PENNSVLVANIA	46,876 395,221 195,951	50,648 437,185 214,290	56,744 435,024 223,834	56,207 465,860 236,244	61,998 527,872 274,019	71,331 581,251 289,296	83,(13 680,273 345,000	86,000 671,899 373,087
EAST NORTH CENTRAL, TOTAL	528,883	580,990	612,214	629,295	682,781	747,405	862,892	873,904
ILLINDIS INDIANA MICHIGAN OHID HISCONSIN	160, 232 59, 515 107, 714 107, 377 94, 045	173,627 71,328 117,877 117,652 100,506	180,144 79,076 125,585 124,217 103,192	190,913 76,181 133,673 129,207 99,321	209,434 77,043 144,557 138,882 112,865	226,377 87,369 157,889 148,999 126,771	260,394 101,734 178,920 174,831 150,013	262,640 100,144 183,814 179,050 148,256
HEST NORTH CENTRAL, TOTAL	247,065	260,979	256,643	261,∠80	267,621	309,033	359,097	360,139
IOMA KANSAS MINNESOTA MISSOURI NEBRASKA NORTH DAKOTA SOUTH DAKOTA	44,958 28,960 65,228 76,908 19,909 7,347 3,755	45,287 30,259 76,527 80,172 14,863 9,371 4,500	46,221 26,101 72,489 80,979 15,871 10,318 4,664	47,898 24,678 79,582 80,978 15,572 7,685 4,887	53,229 24,765 74,279 86,389 14,714 10,031 4,214	61,933 25,845 85,132 94,072 23,816 13,534 4,701	69,925 31,198 104,471 108,629 26,979 12,625 5,269	74,279 33,239 102,295 111,289 24,574 9,479 5,036
SOUTH ATLANTIC, TOTAL	687,809	684,057	833,984	816,790	884,122	1,053,178	1,137,253	1,180,861
DELAHARE DISTRICT OF COLUMBIA FLORIDA GEORGIA MARYLAND NORTH CAROLINA SOUTH CAROLINA VIRGINIA HEST VIRGINIA	9,137 34,539 67,238 317,361 111,071 18,341 60,050 8,459	8,938 38,844 69,561 70,763 286,887 115,678 21,341 63,167 8,938	8,602 37,183 78,868 78,265 414,547 121,701 22,387 64,336 8,095	8,191 42,472 84,924 90,891 366,789 125,749 21,801 67,678 8,295	9,230 54,379 90,328 101,047 377,480 141,393 23,900 77,653 8,716	10,123 46,095 91,555 98,686 532,841 155,208 24,424 83,170 11,075	12,221 56,3479 113,479 118,087 506,892 184,060 33,188 103,152 9,854	12,863 4°,955 121,231 127,973 530,344 194,999 32,726 101,062 9,708
EAST SOUTH CENTRAL, TOTAL	131,785	135,498	140,092	142,906	158,205	165,738	205,350	219,146
ALABAMA KENTUCKY MISSISSIPPI TENNESSEE	41,257 18,755 19,056 52,717	44,264 19,409 14,570 57,255	46,269 18,679 15,842 59,302	45,746 20,526 18,207 58,427	53,565 19,211 18,659 66,770	60,489 21,281 18,103 65,865	70,944 27,186 25,150 82,070	79,921 27,974 22,979 88,272
HEST SOUTH CENTRAL, TOTAL	252,257	277,213	287,594	300,567	318,708	356,507	420,655	431,273
ARKANSAS LOUISIANA OKLAHOMA TEXAS	8,569 27,064 16,155 200,469	8,878 31,182 21,902 215,251	9,213 31,015 18,606 228,760	11,112 34,475 22,795 232,185	10,411 36,213 21,429 250,655	11,935 40,098 24,010 280,464	15,323 51,373 27,880 326,079	14,527 47,715 29,468 339,563
MOUNTAIN, TOTAL	210,529	218,781	234,379	253,635	276,696	328,684	345,949	366,578
ARIZONA COLORADO IDAHO MONTANA NEVADA NEM MEXICO UTAH HYOMING	35,947 67,030 4,178 6,595 4,852 34,460 49,250 8,217	41,648 77,876 4,725 6,609 4,880 33,632 43,788 5,623	42,873 76,974 5,746 5,947 . 6,643 33,661 54,993 7,542	43,431 77,139 4,834 7,445 7,644 47,944 58,129 7,069	49,004 83,570 5,211 6,823 7,875 53,631 59,164 11,418	54,295 97,761 15,765 7,014 7,299 65,427 65,774 15,349	64,672 104,640 5,757 6,549 10,189 60,630 76,557 16,955	65,808 108,473 5,296 8,015 10,895 79,466 81,627 6,998
PACIFIC, TOTAL	747,212	803,885	804,596	832,685	945,486	1,055,013	1,188,994	1,214,448
ALASKA CALIFORNIA HAMAII DREGON HASHINGTOP	22,036 553,577 28,070 43,768 99,761	18,734 588,448 29,990 51,372 115,341	14,902 602,891 24,048 49,092 113,663	11,206 627,600 24,493 55,685 113,701	8,196 723,896 25,860 56,810 130,724	10,611 792,770 24,691 72,618 154,323	12,214 908,141 33,656 70,068 164,915	14,645 934,230 29,196 71,764 164,613
DUTLYING AREAS, TOTAL	9,793	10,037	10,876	11,587	11,838	10,264	11,708	13,112
SUAM PUERTO RICO AMERICAN SAMOA VIRGIN ISLANDS TRUST TERRITORY PAC ISL	628 8,377 0 758 30	8,708 0 650 0		987 8,576 555 890 579	1,080 8,496 584 1,067 611	1,038 8,337 200 599 90	1,138 9,045 115 931 479	1,165 10,268 290 916 473

NOTE: DATA FOR EACH YEAR REFLECT SUPPORT FROM THE AGENCIES INCLUDED IN THE SURVEY SYSTEM FOR THAT YEAR.



TABLE 13. -- FEDERAL OBLIGATIONS TO UNIVERSITIES AND COLLEGES FOR RESEARCH AND DEVELOPMENT BY DETAILED FIELD: FISCAL YEARS 1979-86

(DOLLARS IN THOUSANDS)

FIELD OF SCIENCE/ENGINEERING	1979	1980	1981	1982	1983	1984	1985	1986
TOTAL, ALL FIELDS	3,873,514	4,159,857	4,410,199	4,553, 55	5,023,677	5,634,400		6,538,280
ENGINEERING, TOTAL	574,717	612,456	792,223	804,054	913,604	1,034,194	1,076,219	1,100,065
AERONAUTICAL ASTROMAUTICAL CHEMICAL CIVIL ELECTRICAL MECHANICAL METALLURGY & MATERIALS ENGINEERING, NEC	24,883 3,720 20,866 37,521 82,158 26,013 36,899 342,687	28,044 4,634 22,210 48,130 86,916 42,593 63,057 316,872	31,056 4,875 27,667 58,300 115,011 37,954 52,515 464,545	35,530 8,569 30,274 38,745 139,442 37,836 63,998 449,660	39,765 16,373 37,685 52,231 170,381 42,577 66,146 488,446	40,678 12,405 50,677 55,843 161,336 45,952 75,341 591,962	39,903 14,765 68,602 45,368 231,457 53,214 80,416 542,494	42,257 24,147 50,379 35,40° 212,175 56,416 99,002 580,287
ALL SCIENCES, TOTAL		3,547,401	3,617,976	3,749,701	4,110,073	4,600,206	5,292,389	5,438,215
PHYSICAL SCIENCES, TOTAL	462,867	507,884	500,657	563,440	621,410	715,948	789,184	770,254
ASTRONOMY CHEMISTRY PHYSICS PHYSICAL SCIENCES, NEC	45,036 155,806 224,197 37,828	52,736 170,048 249,461 35,439	54,835 165,189 250,342 30,291	54,001 183,231 284,711 41,497	62,278 192,171 325,998 40,963	78,124 230,689 359,757 47,378	78,654 256,156 397,061 57,313	78,435 255,593 379,289 56,937
MATHEMATICAL/COMPUTER SCIENCES, TOTAL MATHEMATICAL SCIENCES COMPUTER SCIENCES MATH/COMPUTER SCI, NEC 1/	71,609 41,289 29,091 1,229	91,572 53,987 36,140 1,445	91,161 53,668 34,861 2,632	102,531 55,998 44,844 1,689	117,540 63,087 52,727 1,726	135,103 75,176 58,667 1,260	173,314 94,680 78,634 N/A	178,999 96,405 79,413 3,181
ENVIRONMENTAL SCIENCES, TOTAL	339,821	379,453	330,079	344,313	372,236	398,538	453,789	468,882
ATMOSPHERIC SCIENCES	91,222 118,176 74,789 55,634	86,486 109,523 92,079 91,365	95,112 101,207 91,863 41,897	94,463 101,005 102,340 46,505	103,851 101,570 120,448 46,367	114,183 100,901 136,426 47,028	135,562 116,850 138,732 62,645	124,657 118,401 121,855 103,969
LIFE SCIENCES, TOTAL	2,016,524	2,137,751	2,290,587	2,380,991	2,617,274	2,932,582	3,353,349	3,450,126
BIOLOGICAL (EXCL. ENV BIO) ENVIRONMENTAL BIOLOGYAGRICULTURALMEDICALLIFE SCIENCES, NEC	I N/A	1,085,602 13,137 111,739 885,898 41,375	1,192,756 14,636 134,660 904,963 43,379	1,201,934 6,448 162,192 969,253 41,164	1,339,982 8,073 170,180 1,050,458 48,581	1,548,809 80,595 158,369 1,120,032 24,777	1,288,203	1,836,528 86,904 147,717 1 319,873 59,104
PSYCHOLOGY, TOTAL	91,357	86,459	87,734	84,406	93,849	109,787	132,746	138,338
BIOLOGICAL ASPECTSSOCIAL ASPECTSPSYCHOLOGY, NEC	25,164 30,600 35,593	28,269 31,129 27,061	26,273 28,846 32,615	24,735 25,166 34,505	24,760 27,787 41,302	33,515 30,261 46,011	36,205	38,589
SOCIAL SCIENCES, TOTAL	207,258	203,948	197,695	134,323	175,127	162,492	175,909	173,248
ANTHROPOLOGY ECONOMICS HISTORY LINGUISTICS POLITICAL SCIENCE SOCIOLOGY SOCIAL SCIENCES, REC	7,115 52,239 1,451 2,462 8,063 32,217 103,711	7,757 51,414 1,688 2,997 5,890 34,903 99,299	56,704 1,069 2,745 5,122	3,200 3,629 10,661 21,142	17,149 29,890	1,038	45,292 1,494 3,196 6,216 34,887	1,508 2,48 5,003 34,58
OTHER SCIENCES, NEC	109,331	140,334	120,063	139,697	112,637	145,756	214,098	258,368

^{1/} DATA NOT COLLECTED IN FY 1985. INCLUDED UNDER "MATHEMATICAL SCIENCES."

NOTE: DATA FOR EACH YEAR REFLECT SUPPORT FROM THE AGENCIES INCLUDED IN THE SURVEY SYSTEM FOR THAT YEAR.



TABLE 14. -- FEDERAL OBLIGATIONS TO UNIVERSITIES AND COLLEGES BY AGENCY AND TYPE OF ACTIVITY: FISCAL YEAR 1986

(DOLLARS IN THOUSANDS)

		_	AC	CADEHIC :	SCIENCE/ENG	SINEERING			
AGENCY	TOTAL OBLIGATIONS	TOTAL ACADEHIC SCIENCE/ ENGINEER- ING	RESEARCH AND DEVELOP- HENT	R&D PLANT —	FACIL- ITIES FOR INSTRUC- TION IN SCIENCE & ENGINEER- ING	FELLOM- SHIPS, TRAINEE- SHIPS, & TRAINING GRANTS	GENERAL SUPPORT FOR SCIENCE/ ENGINEER- ING	OTHER SCIENCE/ ENGINEER- ING ACTIV- ITIES	NON- SCIENCE/ ENGINEERING ACTIVITIES
TOTAL	11,584,087	7, 3 99,121	6,538,280	105,827	4,990	245,196	111,130	392,698	4,184,966
DEPARTHENT OF AGRICULTURE	611,216	607,707	277,126	9,128	0	4,679	0	316,774	3,509
DEPARTMENT OF COMMERCE	70,272	70,272	68,281	1,192	0	0	37	762	0
DEPARTMENT OF DEFENSE, TOTAL	1,194,252	1,186,413	1,149,664	o	0	518	2,128	34,103	7,849
ARMY	197,137 713,342 249,063 34,720	195,531 709,415 249,063 32,404	179,754 706,414 234,982 28,514	0000	0 0 0	400 118 0 0	2,089 0 39 0	13,288 2,883 14,042 3,890	1,606 3,927 0 2,316
DEPARTMENT OF EDUCATION	3,996,530	74,001	72,202	1,799	0	0	0	0	3,922,529
DEPARTMENT OF ENERGY	420,577	420,537	346,928	73,019	0	550	0	40	40
ENVIRONMENTAL PROTECTION AGENCY	70,754	70,754	67,945	0	0	2,809	0	0	0
DEPARTMENT OF HEALTH & HUMAN SERVICES .	3,773,642	3,535,959	3,212,140	4,234	0	204,339	106,147	9,099	237,683
NATIONAL INSTITUTES OF HEALTH	3,274,178	3,274,178	2,969,333	4,234	0	185,365	106,147	9,099	0
HEALTH RESOURCES AND SERVICES ADMINISTRATION ALCOHOL, DRUG ABUSE, AND MENTAL HEALTH ADMINISTRATION CENTER FOR DISEASE CONTROL FOOD AND DRUG ADMINISTRATION OFFICE OF HUMAN DEVELOPMENT SERVICES HEALTH CARE FINANCING ADMINISTRATION SOCIAL SECURITY ADMINISTRATION OFFICE OF THE ASSISTANT SECRETARY FOR HEALTH OTHER DHMS	212,447 229,938 16,915 4,581 10,737 5,029 905 18,007	6,312 216,477 7,189 4,581 10,737 5,029 661 9,890 905	6,312 198,859 7,189 4,581 10,283 5,029 661 8,988 905	0 0000000000000000000000000000000000000	0	0 17,618 0 454 0 0 902	0 00 00 00 00 00 00 00 00 00 00 00 00 0	0	13,461 9,726 0 0 0 244
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT	332	132	132	۰	١ ,	0	ا ،	0	200
DEPARTMENT OF THE INTERIOR	50.848	40,860	40,860	0		0		1	9,988
AGENCY FOR INTERNATIONAL DEVELOPMENT	44,302	44,302	44,302	,	1	0			1
DEPARTMENT OF LABOR	6,541	3,739	3,739	0	0	0	0		2,802
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	270,280	270,280	254,027	442	0	7,920	0	7,891	0
NATIONAL SCIENCE FOUNDATION	1,055,820	1,055,820	983,933	16,013	4,990	25,152	2,818	22,914	0
NUCLEAR REGULATORY COMMISSION	3,770	3,770	3,770	0	0	0	0	0	0
DEPARTMENT OF TRANSPORTATION	14,941	14,575	13,231	0	0	229	0	1,115	366



TABLE 15. -- SCIENCE/ENGINEFRING GRADUATE STUDENTS IN ALL INSTITUTIONS BY HIGHEST DEGREE GRANTED AND FIELD: 1975-86

				ENVIRON-	HATHE-			LIFE S	CIENCES	-		
YEAR	TOTAL	ENGI- NEERING	PHYSICAL SCIENCES	MENTAL SCIENCES	HATICAL SCIENCES	SCIENCES	TOTAL	AGRI CULTURAL SCIENCES	BIG- LOGICAL SCIENCES	HEALTH SCIENCES	PSYCHOL- OGY	SOCIAL SCIENCES
						ALL INST	ITUTIONS:					
1975 1976 1977 1978 1/ 1979 1980 1981 1982 1983 1984 1985	337,526 344,119 358,323 361,960 373,198 383,100 391,640 398,982 413,355 426,399 434,622 446,102	68, 360 66, 771 69, 142 69, 180 72, 262 75, 084 80, 479 84, 594 93, 155 96, 820 99, 941 105, 294	26,310 26,631 26,621 26,700 26,352 27,382 28,199 29,475 30,487 31,194 32,710	12,289 13,034 13,658 13,560 13,854 14,222 15,174 15,603 15,741 15,342	16,918 17,092 16,069 15,718 15,763 15,360 15,915 17,199 17,443 17,831 18,106 18,379	8,415 8,627 9,108 10,361 11,690 13,578 16,437 19,812 23,616 25,364 29,522 30,726	83,224 87,879 95,472 98,143 99,827 102,504 103,124 102,889 103,702 105,548 106,653 108,328	10,578 11,154 11,524 11,524 12,069 12,254 12,100 12,314 12,290 12,065 11,475 11,325	46,577 47,932 49,291 48,503 47,890 46,979 46,310 46,028 47,008 47,576 48,692	26,069 28,793 34,395 37,098 39,255 42,360 44,265 45,384 45,475 47,602 48,310	36,201 37,469 38,628 39,085 39,786 40,636 40,691 40,691 44,305 44,305 44,306 73,903	85,809 86,616 89,391 89,792 94,016 94,778 93,190 91,017 89,251 90,242 89,405 91,420
						ATE-GRANTII		JTIONS:				
1975 1976 1977 1978 1978 1980 1981 1982 1983 1984 1985 1986	293, 754 298, 159 306, 569 309, 835 320, 580 333, 669 339, 968 346, 796 358, 063 363, 068 372, 022 384, 203	64,579 62,911 64,423 64,269 67,152 70,143 74,373 78,178 86,411 88,272 91,384 97,032	24,529 24,826 24,816 24,718 25,393 25,780 26,499 27,728,413 29,315 30,6^2	10,961 11,737 12,301 12,243 12,575 13,063 13,757 14,267 14,252 14,065	14,391 14,751 13,894 13,180 13,625 14,004 14,758 14,875 15,067 15,268 15,578	6,952 6,967 7,232 8,329 9,488 11,384 13,141 15,576 18,295 20,366 23,823 25,352	73,601 77,184 83,344 85,915 87,462 90,660 90,703 91,130 92,416 93,289 95,918	10,072 10,601 10,947 11,088 11,294 11,577 11,577 11,517 11,531 10,689 10,670	40,940 41,962 43,157 43,135 42,581 42,683 41,877 41,587 41,587 41,577 42,114 42,665 43,717	22,589 24,621 29,240 31,692 33,587 36,405 37,249 38,108 38,971 39,935 41,531	26,923 23,090 28,058 27,911 27,973 29,382 29,082 29,082 29,048 29,991 30,560 30,759	71,818 71,693 72,501 73,256 77,826 80,285 79,647 78,243 76,313 74,217 74,131 74,797
						R'S-GRANTII	NG INSTITU	JTIONS:			· ·	
1975 1976 1977 1978 2 1980 1980 1981 1982 1983 1984 1985 1985	43,772 45,960 51,754 52,125 52,618 49,431 51,672 52,186 55,231 62,600 61,899	3,781 3,860 4,719 4,911 5,110 6,106 6,416 6,744 8,557 8,262	1,781 1,805 2,039 1,903 1,776 1,559 1,602 1,700 1,748 2,074 1,879 2,108	1,328 1,297 1,357 1,317 1,279 1,413 1,359 1,417 1,342 1,477 1,489 1,277	2,527 2,341 2,175 2,024 1,883 1,735 1,911 2,441 2,764 2,838 2,701	1,463 1,660 1,876 2,032 2,202 2,194 3,296 4,236 5,321 4,998 5,699 5,374	9,623 10,695 12,128 12,228 12,365 11,844 12,216 12,186 12,572 13,132 13,364 12,410	506 553 573 6675 775 7737 7734 786 655	5,637 5,970 6,196 5,922 4,996 4,433 4,521 4,894 4,975	3,480 4,175 5,176 5,406 5,468 5,467 7,076 7,276 7,504 7,667 6,779	9,278 9,375 10,570 11,174 11,813 11,23 11,639 11,016 12,056 14,314 13,500 13,144	13,991 14,923 16,890 16,536 16,190 14,193 13,543 12,774 12,938 16,025 15,274 16,623

^{1/} INCLUDES ESTIMATED DATA FOR MASTER'S-GRANTING INSTITUTIONS, MHICH HERE NOT INCLUDED IN THE 1978 SURVEY.



 $^{2^{\}prime}$ ESTIMATES FOR MASTER'S-GRANTING INSTITUTIONS FOR 1978 WERE SASED ON THE DATA FOR 1977 AND 1979.

^{3/} MASTER'S-GRANTING INSTITUTIONS HERE SURVEYED ON A SAMPLE BASIS; DATA SHOWN HERE ARE THEREFORE SUBJECT TO SAMPLING ERROR.

TABLE 16. -- MALE SCIENCE/ENGINEERING GRADUATE STUDENTS IN ALL INSTITUTIONS BY FIELD: 1980-86

5151.0				NUMBER				AVE PER	RAGE ANNUA	AL SE
FIELD	1980	1981	1982	1983	1984 1/	1985 1/	1986 1/	1980-85	1985-86	1980-86
TOTAL, ALL FIELDS	249,328	249,471	252,179	259,961	265,711	270,958	277,337	1.7	2.4	1.8
ENGINEERING AEROSPACE AGRICULTURAL 810MEDICAL CHEMICAL CIVIL ELECTRICAL ENGINEERING SCIENCE INDUSTRIAL MECHANICAL METALLURGICAL/MATERIALS NING NUCLEAR PETROLEUM FNGINEERING, N.E.C.	68,581 1,663 7,845 51,9244 11,645 8,354 2,607 1,160 2,676	72,548 1,816 7577 5,718 12,7778 11,764 8,464 9,987 2,735 1,199 6,641	75,621 1,831 818 897 6,288 12,614 20,466 1,864 10,748 2,704 1,215 7,007	82,793 2,283 896 974 6,547 13,388 23,157 1,990 12,106 2,999 12,106 2,999 11,119 665 7,423	85,669 2,298 872 1,073 6,462 13,551 24,624 1,890 9,001 12,963 3,194 458 1,146 684 7,454	87,961 2,475 863 1,082 6,140 13,046 26,132 10,115 13,095 3,338 459 1,113 716	92,06C 2,706 989 1,201 5,931 13,176 27,324 2,089 10,774 14,385 3,525 3,525 1,142 699 7,644	13018757501682753.521723753.95	4.7 9.3 14.6 11.0 -3.4 1.6 11.0 6.5 9.8 53.7 2.6 -2.4	5.05 8.56.00 1.860 1.60 4.10 4.04 7.53 31
SCIENCES, TOTAL	,	176,923	176,558	177,168	180,042	182,997	185,277	.2	1.2	.4
PHYSICAL SCIENCES ASTRONOMY CHEMISTRY PHYSICS PHYSICAL SCIENCES, N.E.C	22,352 546	22,366 506 12,544 9,133 183	22,776 531 12,855 9,238 152	23,594 526 13,297 9,609 162	24,201 541 13,263 10,172 226	24,636 563 13,652 10,166 255	25,712 568 13,873 10,344 279	2.0 .6 1.4 2.6 13.1	4.4 .9 1.6 8.1 9.0	2.4 .7 1.5 3.5 12.4
ENVIRONMENTAL SCIENCES	1,505	10,945 758 6,746 1,529	11,393 764 7,318 1,514	11,634 766 7,808 1,497	11,849 769 7,895 1,563	11,724 807 7,899 1,477	11,328 782 7,575 1,431	1.4 .7 3.2 4	-3.4 -3.1 -4.1 -3.1	.6 2.0 8
N.E.C	1,913	1,912	1,797	1,563	1,622	1,541	1,540	-4.2 2.2	1.8	-3.6 2.1
MATHEMATICAL SCIENCES COMPUTER SCIENCES		11,419	12,109 14,366	12,222	18,659	22,326	23,266	16.3	4.2	14.2
LIFE SCIENCES		49,353	47,646	46,753	46,759	46,734	47,043	-1.8	.7	-1.4
AGRICULTURAL SCIENCES		9,370	9,314	9,183	8,937	8,522	8,377	-2.0	-1.7	-2.0
BIOLOGICAL SCIENCES ANATOMY BIOCHEMISTRY BIOLOGY BIOMETRY/EPIDEM: OLOGY BIOMETRY/EPIDEM: OLOGY BIOTANY CELL BIOLOGY ECOLOGY ENTOMOLOGY / PARASITOLOGY GENESICS MICROSIOLOGY NUTRITION PATHOLOGY PHARMACOLOGY PHARMACOLOGY BIOSCIENCES, N.E.C.	29,492 673 2,732 9,347 648 380 2,429 619 813 1,368 1,428 922 1,361 1,428 922 1,361 1,467	28,210 683 2,694 8,651 338 2,285 651 730 1,308 470 2,309 1,386 882 1,330 1,452 1,718 667	27,021 669 2,630 7,873 561 330 2,329 726 684 461 2,318 1,368 872 1,356 1,367 1,651 1,668	26,553 2,658 7,670 7,670 338 2,201 7774 666 1,090 512 2,385 1,326 883 1,328 1,329 1,609	26,875 2,804 7,828 326 2,168 7,746 1,066 545 2,421 1,317 872 1,277 1,277 1,388 1,483	26,923 2,936 6,40 3311 662 993 595 2,505 2,505 1,355 787 1,379 1,379	27,167 3,004 7,646 677 410 2,134 1,044 616 948 663 2,494 1,309 825 1,269 1,297 1,310 861	-1.8 -3.3 1.5 -3.7 -2.7 -3.0 8.0 -4.0 -4.0 -6.2 3.7 -1.0 -3.1 -1.2 -4.9	-1.63 -1.22 -5.89 -2.32 -14.69 -4.5 -11.43 -3.44 -2.44 -1.33 -4.64	-1.4 -3.0 1.6 -3.3 -2.3 -4.5 -5.0 -1.8 -1.8 -4.8 -4.8
HEALTH SCIENCES DENTISTRY NEUROLOGY NURSING PHARMACEUTICAL SCIENCES PREVENTIVE MEDICINE/	12,123 801 175 649 1,730	11,773 716 131 730 1,797	11,311 676 140 717 1,751	11,018 607 189 747 1,776	10,948 664 208 754 1,635	11,289 648 208 766 1,653	11,499 724 237 783 1,710	-1.4 -4.2 3.5 3.4 9	1.9 11.7 13.9 2.2 3.4	-1.7 5.2 3.2
COMMUNITY HEALTH SPEECH PATHOLOCY/AUDIOLOGY VETERINARY SCIENCES CLINICAL MEDICINE, N.E.C HEALTH RELATED, N.E.C	332 823	3,385 1,186 304 865 2,659	1,220 297 954 2,570	2,578 1,186 289 844 2,802	2,562 1,165 346 767 2,847	2,723 1,180 401 791 2,918	2,817 998 394 915 2,921	-4.4 -2.1 3.8 8	3.5 -15.5 -1.7 15.6	-3. -4. 2. 1.
PSYCHOLOGY	19,036	17.902	16,980	16,706	17,170	16,609	16,088	-2.7	-3.1	-2.8
SOCIAL SCIENCES AGRICULTURAL ECONOMICS ANTHROPOLOGY ECONOMICS	3,009	52,7 1,791 2,791	51,288 1,804 2,677	49,290 2,8.7 2,438		1 .	i.	-2.7 -1.3 -3.6	1.3 -1.1 9	-2. -1. -3.
(EXCEPT AGRICULTURAL) GEOGRAPHY	10,126 2,267	10,139 2,198	10,237 2,195	10,159 2,051	9,791 2,079	9,682 1,994	9,512 2,055	-2.5	-1.8 3.1	-1.
GEOGRAPHY HISTORY AND PHILOSOPHY OF SCIENCE LINGUISTICS POLITICAL SCIENCE SOCIOLOGY SOCIOLOGY/ANTHROPOLOGY SOCIAL SCIENCES, N.E.C.	1,325 20,340 3,984 648	159 1,349 19,255 3,780 944 10,704	167 1,180 18,631 3,376 553 10,468	161 1,217 17,431 3,269 586 10,171	187 1,244 16,816 3,190 504 10,795	3,111 476	17,004 2,977 /51	1.6 -2.4 -3.2 -4.8 -6.0 -3.0		-1. -2. -4. -5.

^{1/} INCLUDES ESTIMATED DATA FOR MASTER'S—GRANTING INSTITUTIONS, MHICH MERE SURVEYED ON A SAMPLE BASIS BEGINNING IN 1984.



TABLE 17. -- FEMALE SCIENCE/ENGINEERING GRADUATE STUDENTS IN ALL INSTITUTIONS BY FIELD: 1980-86

FIELD				NUMBER				AV PE	ERAGE ANNU	AL GE
FIELD	1980	1981	1982	1983	1984 1/	1985 1/	1986 1/	1980-85	1985-86	1980-86
TOTAL, ALL FIELDS	133,772	142,169	146,803	153,394	160,688	163,664	168,765	4.1	3.1	3.9
ENGINEERING AEROSPACE AGRICULTURAL BIOMEDICAL CIVIL ELECTRICAL ENGINEERING SCIENCE INDUSTRIAL MECHANICAL METALLURGICAL/MATERIALS MINING MUCLEAR PETROLEUM ENGINEERING, N.E.C.	6,503 74 31 166 679 1,529 1,350 1,350 303 81 41 553	7,931 67 433 778 1,276 201 1,560 631 390 84 52 892	8,973 110 57 219 901 1,959 1,551 266 1,654 719 420 86 40 86 42	10,362 125 73 270 1,016 2,018 2,056 291 1,943 805 448 47 84 72	11,151 133 82 294 983 2,189 2,222 301 2,174 470 444 88 60 1,151	11,980 167 78 291 1,016 2,305 2,408 245 2,417 1,016 601 30 107 66 1,234	13,234 201 85 346 1,032 2,332 2,899 302 2,699 1,155 667 36 123 48 1,309	13.0 17.7 20.3 11.9 8.4 8.6 10.2 12.4 13.7 14.7 1.4 5.7 10.0	10.5 20.4 9.0 18.9 1.6 20.4 23.3 11.7 13.7 11.0 20.0 15.0 15.0 6.1	12.6 18.1 18.3 13.0 7.2 7.3 19.8 12.2 12.2 13.7 14.1 7.2 2.7
SCIENCES, TOTAL	127,269	134,238	137,830	143,032	149,537	151,684	155,531	3.6	2.5	3.4
PHYSICAL SCIENCES ASTRONOMY CHEMISTRY PHYSICS PHYSICS PHYSICAL SCIENCES, N.E.C.	4,600 82 3,504 948 66	5,016 91 3,803 1,017 105	5,423 101 4,160 1,068 94	5,881 92 4,513 1,202 74	6,285 98 4,710 1,345 132	6,559 108 4,835 1,494 122	6,998 121 5,143 1,585 149	7.4 5.7 6.7 9.5 13.1	6.7 12.0 6.4 6.1 22.3	7.2 6.7 6.6 8.9 14.5
ENVIRONMENTAL SCIENCES ATMOSPHERIC SCIENCES GEOSCIENCES CCEANGGRAPHY ENVIRONMENTAL SCIENCES,	3,268 110 1,925 487	3,477 124 2,062 553	3,781 125 2,303 577	3,975 130 2,513 566	3,954 138 2,471 628	4,017 157 2,484 613	4,014 179 2,373 651	4.2 7.4 5.2 4.7	1 14.0 -4.5 6.2	3.5 8.5 3.5 5.0
N.E.C	746 4,088	738 4,496	776 5,090	766 5,221	717 5,269	763 5,532	811 5,584	.5 6.2	6.3	1.4 5.3
COMPUTER SCIENCES	3,087	4,209	5.446	6,648	6,705	7,196	7,460	18.4	3.7	15.8
LIFE SCIENCES	51,442	53,771	55,243	56,948	58,788	59,919	61,285	3.1	2.3	3.0
AGRICULTURAL SCIENCES	2,807	2,730	3,000	3,107	3,128	2,953	2,948	1.0	2	.8
BIOLOGICAL SCIENCES ANATOMY BIOCHEMISTRY BIOLOGY BIOMETRY/EPIDEMIOLOGY BIOMETRY/EPIDEMIOLOGY BIOMETRY/EPIDEMIOLOGY BIOMETRY CELL BIOLOGY ENTOMOLOGY/PARACITOLOGY GENETICS MICROBIOLOGY NUTRITION PATHOLOGY PHARMACOLOGY PHARMACOLOGY PHYSIOLOGY PHYSIOLOGY STORMAN PERMACOLOGY PHYSIOLOGY BIOSCIENCES, N.E.C.	430	18,769 389 1,367 5,552 1,253 1,213 367 371 356 467 1,761 2,969 694 692 907 451	19, 289 405 1, 694 5, 524 605 110 1, 315 417 367 382 529 1, 812 2, 991 1, 812 2, 991 852 479	19,475 405 1,576 5,618 609 112 1,249 408 341 385 523 1,877 3,032 741 877 821 502	20,133 424 1,661 5,955 532 107 1,237 467 3,525 372 467 1,934 3,022 823 638	20,653 424 1,731 5,961 720 110 1,244 518 375 349 480 1,978 3,130 807 763 664	21,526 413 1,871 6,152 792 137 1,179 672 388 358 556 1,993 3,130 811 864 769 868	2.37 5.61 3.3 .99 8.44 35 2.7 3.03 4.35 -3.7 9.1	4.2 -2.6 8.1 10.05 -5.2 29.6 15.8 * 95 3.8 30.8	2.7 6.0 1.4 4.4 4.5 1 11.7 2.2 2.3 2.5 3.7 -3.0
HEALTH SCIFNCES DENTISTR NEUROLOGY NURSING PHARMACEUTICAL SCIENCES DEFUNT VERMENTET	30,237 201 74 13,228 704	32,272 226 60 14,973 752	32,954 160 64 15,537 768	34,366 169 72 16,198 865	35,527 186 109 17,657 884	36,314 187 129 17,601 900	36,811 206 146 17,338 967	3.7 -1.4 11.8 5.9 5.0	1.4 10.2 13.2 -1.5 7.4	3.3 12.0 4.6 5.4
PREVENT VE MEDICINE/ COMM ITY HEALTH SPEECK THOLOGY/AUDIOLOGY VETERINARY SCIENCES CLINICAL MEDICINE, N.E.C HEALTH RELATED, N.E.C	3,688 7,301 179 794 4,068	3,841 7,410 177 745 4,088	3,830 7,463 174 793 4,165	3,610 7,646 177 800 4,829	3,765 6,718 211 726 5,271	4,025 6,973 236 852 5,410	3,926 6,997 236 951 6,044	1.8 9 5.7 1.4 5.9	-2.5 .3 .0 11.6 11.7	1.0 7 4.7 3.1 6.8
PSYCHOLOGY	21,600	22,789	23,118	24,398	27.135	27,452	27,815	4.9	1.3	4.3
SOCIAL SCIENCES AGRICULTURAL ÉCONOMICS ANTHROPOLOGY ECONOMICS	39.184 469 3,313	40,480 471 3,327	39,729 463 3,271	39,961 488 3,206	41,400 484 3,155	41,009 503 3,106	42,375 496 3,355	.9 1.4 -1.3	3.3 -1.4 8.0	1.3
(EXCEPT AGRICULTURAL) GEOGRAPHY HISTORY AND PHILOSOPHY	3,006 937	3,205 989	3,498 971	3,428 1,009	3,274 1,027	3,317 994	3,318 1,032	2.0	3.9	1.7
OF SCIENCE LINGUISTICS POLITICAL SCIENCE SOCIOLOGY SOCIOLOGY/ANTHRÔPOLOGY SOCIAL SCIENCES, N.E.C.	1,682 10,872 4,017 558 14,239	89 1,790 11,536 4,036 566 14,471	1,623 11,276 3,870 580 14,088	1,805 10,872 3,680 614 14,767	1,829 10,625 3,671 586 16,663	109 1,762 11,467 3,481 587 15,682	110 1,774 11,625 3,558 601 16,506	3.7 .9 i.1 -2.8 1.0 1.9	.9 .7 1.4 2.2 2.4 5.3	3.2 .9 1.1 -2.0 1.2 2.5

^{1/} INCLUDES ESTIMATED DATA FOR MASTER'S-GRANTING INSTITUTIONS, WHICH HERE SURVEYED ON A SAMPLE BASIS BEGINNING IN 1984.



^{*} LESS THAN 0.05-PERCENT CHANGE

TABLE 18. -- SCIENCE/ENGINEERING GRADUATE STUDENTS IN ALL INSTITUTIONS BY FIELD, CITIZENSHIP, AND RACIAL/ETHNIC BACKGROUND: 1980-86

FIELD, CITIZENSHIP, AND RACIAL/ETHNIC BACKGROUND				NUM8 ER				AV PE	ERAGE ANN RCENT CHA	UAL NGE
	1980 1/	1981 1/	1982	1983	1984 2/	1985 2/	1986 2/	1980-85	1985-86	1980-86
TOTAL, ALL FIELDS:	1	391,640	398,982	413, 355	426,399	434,622	446,102	2.6	2.6	2.6
TOTAL US CITIZENS BLACK, NON-HISPANIC AMERICAN INDIAN/ALASKAN NATIVE ASIAN/PACIFIC ISLANDER HISPANIC HHITE, NON-HISPANIC OTHER OR UNKNOMN FOREIGN	11,627 915 8,224 7,412 228,655	11,144 747 7,787 7,282 219,415	330,564 13,325 1,176 9,335 9,326 261,581 35,821 68,418	238,994 14,46 1,219 10,657 11,169 276,835 24,646 74,361	14,870 1,164 12,327	353,325 14,567 1,031 14,165 11,415 277,787 34,361 81,297	357,679 14,394 1,055 15,184 11,552 282,154 33,339 88,423	** 4.6 2.4 11.5 9.0 4.0 **	1.2 -1.2 2.3 7.2 1.2 1.6 -3.0 8.8	** 3.6 2.4 10.8 7.7 3.6 **
ENGINEERING:		80,479	84,594	93,155	96,820	99,941	105,294	5.9	5.4	5.8
TOTAL US CITIZENS BLACK, NON-HISPANIC AMERICAN INDIAN/ALASKAN NATIVE ASIAN/PACIFIC ISLANDER HISPANIC HHITE, NON-HISPANIC OTHER OR UNKNOWN FOREIGN	930 75 2,710 1,084 36,974	880 109 2,234 941 37,269	59,385 1,144 171 2,747 1,101 43,376 10,846 25,209	65,320 1,419 185 3,462 1,495 49,982 8,777 27,835	68,295 1,544 207 4,217 1,657 51,535 9,135 28,525	70,611 1,508 130 5,139 1,595 52,425 9,815 29,330	72,845 1,560 138 5,439 1,684 54,578 9,446 32,449	10.1 11.6 13.7 8.0 7.2	3.2 3.4 6.7 5.8 5.6 4.1 -3.8 10.6	** 9.0 10.7 12.3 7.6 6.7 **
SCIENCES, TOTAL:	308,016	311,161	314,388	320,200	329,579	334,681	340,808	1.7	1.8	1.7
TOTAL US CITTZENS BLACK, NON-HISPANIC AMERICAN INDIAN/ALASKAN NATIVE ASIAN/PACIFIC ISLANDER HISPANIC HHITE, NON-HISPANIC OTHER OR UNKNOWN FOREIGN	10,697 840 5,514 6,328 191,681	10,264 638 5,553 6,341 182,146	271,179 12,181 1,005 6,588 8,225 218,205 24,975 43,209	273,674 13,049 1,034 7,195 9,674 226,853 15,869 46,526	281,178 13,326 957 8,110 10,405 226,681 21,700 48,401	282,714 13,059 902 9,026 9,820 225,362 24,546 51,967	284,834 12,334 917 9,745 9,868 227,576 23,893 55,974	** 4.1 1.4 10.4 9.2 3.3 **	-1.7 1.7 8.0 .5 1.0 -2.7 7.7	** 3.1 10.5 10.7 7.7 2.9 **
PHYSICAL SCIENCES:	26,952	27,382	28,199	29,475	30,487	31,194	32,710	3.0	4.9	3.3
TOTAL US CITIZENS BLACK, NON-HISPANIC AMERICAN INDIAN/ALASKAN NATIVE ASIAN/PACIFIC ISLANDER HISPANIC HHITE, NON-HISPANIC OTHER OR UNKNOWN FOREIGN	419 14 626 370 16,323	435 19 623 373 15,856	21,254 553 50 697 496 17,689 1,769 6,945	21,813 575 749 563 18,663 1,218 7,662	22,421 613 86 943 541 18,838 1,399 8,066	22,256 547 37 972 604 18,479 1,617 8,939	22,812 565 52 1,064 653 18,800 1,678 9,898	** 5.5 21.5 9.2 10.3 2.5 **	2.5 3.2 41.5 9.5 8.2 1.7 3.8 10.7	** 5.1 24.4 9.9 9.9 2.4 **
ENVIRONMENTAL SCIENCES:		14,422	15,174	15,609	15,803	15,741	15,342	2.1	-2.5	1.3
TOTAL US CITIZENS BLACK, NON-HISPANIC AMERICAN INGIAN/ALASKAN NATIVE ASIAN/PACIFIC ISLANDER HISPANIC HHITE, NON-HISPANIC OTHER OR UNKNOWN FOREIGN	104 38 170 149 9,753	102 15 126 154 9,183	13,290 103 22 208 191 11,393 1,373 1,884	13,734 112 27 243 227 12,371 754 1,875	13,994 112 23 193 272 12,142 1,252 1,808	13,832 127 22 194 272 11,903 1,314 1,909	13,320 102 21 177 271 11,663 1,088 2,022	** 4.1 -10.4 2.7 12.8 4.1 **	-3.7 -20.0 -4.5 -8.7 -7 -2.0 -17.2 5.9	** 3 9.4 .7 10.5 3.0 **
MATHEMATICAL SCIENCES:	15,360	15,915	17,199	17,443	17,831	18,106	18,379	3.3	1.5	3.0
TOTAL US CITIZENS BLACK, NON-HISPANIC AMERICAN INDIAN/ALASKAN NATIVE ASIAP/PACIFIC ISLANDER HISPANIC HHITE, NON-HISPANIC GTHER OR UNKNOWN FOREIGN	300 38 324 190 8,076	304 7 385 230 8,054	12,618 357 42 492 290 10,158 1,329 4,531	12,482 404 33 564 332 10,331 818 4,961	12,548 400 31 634 298 10,016 1,168 5,283	12,676 423 27 692 267 9,871 1,396 5,430	12,471 448 727 304 9,476 1,473 5,907	7.1 -6.6 15.4 7.0 4.1	-1.6 61.0 5.1 13.9 -4.0 5.5 8.8	** 6.9 2.5 14.4 8.1 2.7 **
COMPUTER SCIENCES:	13,578	16,437	19,812	23,616	25,364	29,522	30,726	16.8	4.1	14.6
TOTAL US CITIZENS BLACK, HON-HISPANIC AMERICAN INDIAN/ALASKAN NATIVE ASIAN/PACIFIC ISLANGER HISPANIC HHITE, MON-HISPANIC OTHER OR UNKNOWN FOREIGN	193 11 569 100 6,551	262 5 638 135 7,254	15,439 528 31 890 249 11,574 2,167 4,373	18,068 564 22 1,099 282 13,482 2,619 5,548	19,135 528 48 1,150 260 13,638 3,513 6,229	22,147 578 56 1,800 411 15,061 4,242 7,375	22,872 658 20 2,039 426 15,790 3,939 7,853	24.5 38.5 25.9 32.7 18.1 0*	3.3 14.0 -63.8 13.3 3.7 4.8 -7.1 6.5	22.7 10.5 23.7 27.3 15.8 **

See footnotes at end of table.



TABLE 18. -- SCIENCE/ENGINEERING GRADUATE STUDENTS IN ALL INSTITUTIONS BY FIELD, CITIZENSHIP, AND RACIAL/ETHNIC BACKGROUND: 1980-86 -- Continued

FIELD, CITIZENSHIP, AND RACIAL/ETHNIC BACKGROUND				NUM8ER				AY Pe	ERAGE ANN RCENT CHA	UAL NGE
THE STATE OF THE S	1980 1/	1981 <u>1</u> /	1982	1983	1984 2/	1985 2/	1986 2/	1980-85	1985-86	1980-86
LIFE SCIENCES, TOTAL:		103,124	102,889	103,702	105,548	106,653	108,328	.8	1.6	. 9
TOTAL US CITIZENS BLACK, NON-HISPANIC AMERICAN INDIAN/ALASKAN NA\IYE ASIAN/AN INDIAN/ALASKAN NA\IYE ASIAN/PACIFIC ISLANDER HISPANIC HHITE, NON-HISPANIC OTHER OR UNKNOHN FOREIGN	2,711 240 2,101 1,972 71,192	2,445 173 1,830 1,404 67,501	\$1,628 2,941 287 2,225 1,941 78,224 6,010 11,261	91,849 3,256 340 2,370 2,587 79,958 3,334 11,852	93,217 3,415 277 2,600 2,626 80,324 3,975 12,331	2,839 3.040	94,099 3,350 301 3,074 2,912 79,420 5,041 14,229	5.7 1.8 6.2 9.0 2.0	-6.2 14.9 8.3 -4.2 8 -3.4 10.0	3. 3. 6. 6. 1.
GRICULTURAL SCIENCES:	12,254	12,100	12,314	12,290	12,065	11,475	11,325	-1.3	-1.3	-1.:
TOTAL US CITIZENS BLACK, NON-HISPANIC AMERICAN INDIAN/ALASKAN NATIVE ASIAM/PACIFIC ISLANDER HISPANIC HHITE, NON-HISPANIC OTHER OR UNKNOHN FOREIGN	108 19 145 285 7,712	126 13 122 168 7,709	9,714 145 25 138 210 8,504 692 2,600	9,598 133 32 133 223 8,667 410 2,692	9,408 137 21 162 294 8,500 294 2,657	8,869 158 20 174 399 7,722 396 2,606	8,584 132 31 147 341 7,671 262 2,741	** 7.9 1.0 3.7 7.0 * **	-3.2 -16.5 55.0 -15.5 -14.5 7 -33.8 5.2	** 3.4 8.5 3.0 1
BIOLOGICAL SCIENCES:		46,979	46,310	46,028	47,008	47,576	48,692	1	2.3	.:
TCTAL US CITIZENS 8LACK, MON-HISPANIC AMERICAN INDIAN/ALASKAN NATIVE ASIAN/PACIFIC ISLANDER HISPANIC HITE, NON-HISPANIC OTHER OR UNKNOHN FOREIGN	982 56 1,115 768 33,680	919 40 962 586 31,364	40,692 1,128 92 1,131 810 34,843 2,688 5,618	39,950 1,162 121 1,275 912 34,984 1,496 6,078	40,456 1,153 88 1,386 850 35,368 1,610 6,552	40,501 1,251 91 1,597 975 34,676 1,912 7,075	40,721 1,140 113 1,772 1,031 34,828 1,837 7,972	5.0 10.2 7.4 4.9 .6	-8.9 23.9 11.0 5.7 -4 -3.9 12.7	2.5 12.6 8.0 5.0 **
HEALTH SCIENCES:	42,360	44,045	44,265	45,384	46,475	47,602	48,310	2.4	1.5	2.
TOTAL US CITIZENS BLACK, NON-HISPANIC AMERICAN INDIAN/ALASKAN NATIVE ASIAM/PACIFIC ISLANDER HISPANIC HHITE, NON-HISPANIC OTHER OR UNKNOHN FOREIGN	1,621 165 841 919 29,800	1,400 120 746 650 28,428	41,222 1,668 170 956 921 34,877 2,630 3,043	42,301 1,961 191 962 1,452 36,307 1,428 3,083	43,353 2,124 168 1,052 1,482 36,456 2,071 3,122	44,347 2,164 151 1,068 1,666 36,386 2,912 3,255	44,794 2,079 158 1,155 1,540 36,921 2,942 3,516	** 5.7 -1.8 4.9 12.6 4.1 **	1 0 -4.0 4.2 8.2 -7.5 1.0 8.0	** 4.: 5.: 9.(3.: **
PSYCHOLOGY:	40,636	40,691	40,098	41,104	44,305	44,060	43,903	1.6	4	1.3
TOTAL US CITIZENS BLACK, NON-HISPANIC AMERICAN INDIAN/ALASKAN NATIVE ASIAN/PACIFIC ISLANDEP HISPANIC HHITE, NON-HISPANIC OTHER OR UNKNOWN FOREIGN	1,418 233 372 1,298 24,736	1,450 93 406 1,231 23,497	38,704 1,643 139 441 1,471 30,321 4,689 1,394	39,672 1,916 135 532 1,830 32,702 2,557 1,432	42,842 2,20 9 2,96 33,229 3,985 1,463	683	42,339 2,047 149 750 1,869 34,087 3,436 1,564	** 7.9 -7.5 12.9 6.1 6.6 **	3 -1.3 -5.3 -9.8 6.8 -7.9 -2.2	** 6.3 -7.4 12.4 6.3 5.5 **
SOCIAL SCIENCES:	94,778	93,190	91,017	89,251	90,242	89,405	91,420	-1.2	2.3	6
TOTAL US CITIZENS BLACK, MON-HISPAMIC AMERICAN INDIAN/ALASKAN NATIVE ASIAN/PACIFIC ISLA: HISPANIC HHITE, NON-HISPANIC OTHER OR UNKNOWN FOREIGN	5,552 266 1,352 2,249 55,050	5,266 326 1,545 2,814 50,801	78,196 6,056 434 1,635 3,587 58,846 7,638 12,821	76,056 6,222 428 1,638 3,853 59,346 4,569 13,195	77,021 6,058 358 1,890 3,812 58,493 6,410 13,221	75,626 5,735 340 1,848 3,477 57,201 7,025 13,779	76,919 5,664 329 1,915 3,433 58,340 7,239 14,500	** .7 5.0 6.4 9.1 .8 **	1.7 -1.2 -3.1 3.6 -1.3 2.0 3.0 5.2	** 3.6 6.0 7.3 1.0 **



^{1/} FOR PART-TIME STUDENTS, DISTRIBUTION BY CITIZENSHIP MAS NOT REQUESTED PRIOR TO 1982.
2/ INCLUDES ESTIMATED DATA FOR MASTER'S-GRANTING INSTITUTIONS, MHICH MERE SURVEYED ON A SAMPLE BASIS BEGINNING IN 1984.

				NUMBER				AV PE	ERAGE ANNU.	AL SE
TYPE AND SOURCE OF HAJOR SUPPORT	1980	1981	1982	1983	1984 1/	1985 1/	1986 1/	1980-85	1985-86	1980~86
TOTAL, ALL TYPES: TOTAL, ALL SOURCES FEDERAL, TOTAL DEPT OF DEFENSE DEPT OF HHS, TOTAL NIH OTHER HHS NSF ALL OTHER FEDERAL INSTITUTIONAL SUPPORT OTHER OUTSIDE SUPPORT, TOTAL ALL OTHER U.S. FOREIGN SELF-SUPPOR?	249, 159 54,5286 19,955 11,769 9,352 19,521 19,514 21,846 13,348 8,348 82,281	252,997 52,696 18,387 11,441 6,946 9,182 18,865 94,035 23,211 14,297 8,914 83,621	255, 297 48, 493 5, 4964 16, 391 11, 019 5, 372 9, 294 16, 834 97, 486 24, 511 15, 367 9, 144 84, 817	263,690 48,617 7,047 15,290 10,977 4,313 9,537 16,743 101,042 25,347 16,289 9,058 88,684	267,320 48,786 7,143 15,615 11,290 4,325 9,872 16,156 105,157 25,455 17,180 8,275 87,922	270,353 50,000 7,301 16,443 11,451 10,215 16,041 106,456 27,098 19,246 7,853 86,800	279.235 52.748 7,884 17,017 12,310 4,708 10,839 17,008 111,025 27,777 20,044 7,733 87,685	1.6 -1.7 -3.8 -9.4 1.82 -3.3 4.4 7.4 -1.2	3.5.5.5.7.6.1.0 4.3.5.5.1.0	1.959 -2.68 -8.8556 -3.6551 -1.11
FELLOMSHIPS: TOTAL, ALL SOURCES FEDERAL, TOTAL DEPT OF DEFENSE DEPT OF HHS, TOTAL NIH OTHER HHS NSF ALL OTHER FEDERAL INSTITUTIONAL SUPPORT OTHER OUTSIDE SUPPORT, TOTAL ALL OTHER U.S. FOREIGN SELF-SUPPORT	21,299 4,778 257 1,309 507 1,332 1,880 9,869 6,652 3,416 0	20,767 4,238 1,990 1,027 305 1,7746 9,564 6,965 3,723 0	21, 557 4, 277 204 909 248 1, 308 1, 856 9, 816 7, 464 3, 685 3, 779	22,251 4,266 257 833 594 239 1,368 10,440 7,545 3,883 3,662	22.683 4,299 241 867 658 199 1,349 1,852 10,963 7,421 4,212 3,209	23,254 4,483 265 891 646 245 1,409 1,918 11,587 7,183 4,317 2,866	23,989 4,709 291 877 705 172 1,524 2,017 12,170 7,111 4,315 2,796	1.8 -1.3 -7.4 -7.4.2 -13.5 1.1 3.3 1.5,9 -3.5	3.2 9.8 -1.6 9.1 -29.8 8.2 5.0 -1.1 -2.4	2.0 2 2.1 -6.5 -2.1 -16.5 2.3 3.6 4.1 -3.3
TRAINEESHIPS: TOTAL, ALL SOURCES FEDERAL, TOTAL DEPT OF DEFENSE DEPT OF HHS, TOTAL NIH OTHER HHS ALL OTHER FEDERAL INSTITUTIONAL SUPPORT OTHER OUTSIDE SUPPORT, TOTAL ALL OTHER U.S. FOREIGN SELF-SUPPORT	18,759 14,343 73 11,757 5,118 6,639 2,267 3,254 1,162 330 0	17,925 13,035 80 10,702 4,896 5,806 144 2,109 3,754 1,136 864 272	15,496 10,696 34 9,140 4,787 4,353 3,618 1,432 3,618 1,182 871 311	14, 195 9, 453 84 7,880 4,557 3,323 61 1,428 3,571 1,171 806 365	14,289 9,400 76 7,858 4,464 3,394 55 1,411 3,820 1,069 791 278	14,603 9,491 53 8,070 4,299 3,771 56 1,311 3,977 1,135 840 295	14,410 9,103 88 7,771 4,165 3,606 1,217 4,243 1,043 224 0	-4.9 -7.9 -6.2 -7.2 -3.4 -10.7 -25.6 -10.4 4.1 5 -2.2	-1.3 -4.1 66.0 -3.7 -3.1 -4.4 -51.8 -7.2 7.2 -8.1 -24.2 0	-4.3 -7.3 3.2 -6.7 -3.4 -9.8 -9.8 -1.8 -1.8 -6.3
RESEARCH ASSISTANTSHIPS: TOTAL, ALL SOURCES FEDERAL, TOTAL DEPT OF DEFENSE DEPT OF HMS, TOTAL OTHER HMS NSF ALL OTHER FEDERAL INSTITUTIONAL SUPPORT OTHER OUTSIDE SUPPORT, TOTAL ALL OTHER U.S. FOREIGN SELF-SUPPORT	51,954 29,334 6,062 5,459 603 7,630 12,769 16,688 5,871 5,321 5,50 0	53,144 29,207 3,297 6,081 5,520 561 7,602 12,227 17,549 6,383 5,780 608	53,027 28,345 3,469 5,801 5,281 11,322 17,795 6,887 6,299 588 0	55,612 29,935 6,010 5,458 8,073 11,191 11,191 7,847 7,287 7,287	58,408 29,543 4,081 6,408 5,820 10,763 20,233 8,631 8,031 8,031	61, 427 30, 574 4, 172 6, 776 6, 212 10, 826 20, 639 10, 212 9, 659 553	66,496 32,939 4,619 7,858 7,105 752 9,083 11,380 23,144 10,413 9,806 607	3.4 8 7.4 2.8 2.6 4.8 2.4 3.1 11.7 12.7	8.3 7.7 10.2 12.6 14.4 -1.5 5.8 5.1 12.1 2.0 9	4.2 1.9 7.9 4.4 4.5 3.7 2.9 -1.9 -1.9 10.0 10.7
TEACHING ASSISTANTSHIPS: TOTAL ALL SOURCES FEDERAL, TOTAL DEPT OF DEFENSE DEPT OF HHS, TOTAL OTHER HHS NSF ALL OTHER FEDERAL INSTITUTIONAL SUPPORT OTHER OUTSIDE SUPPORT, TOTAL ALL OTHER U.S. FOREIGN SELF-SUPPORT	145 83 62 37 498 53,114 340 340	56.023 622 0 118 75 43 61 443 54,992 409 409	58,652 431 0 110 49 61 27 294 57,732 489 489 0 0	60,521 505 0 112 75 37 25 368 59,624 392 392	412 0 73 44 29 28 311 61,001 442 442	557 98 59 39 43 416 61,332 520 520	551 0 116 87 29 76 359 61,622 653 553	2.9 -3.9 0 -7.56 -6.6 3.1 -3.59 8.9 0 0	-7 -1.20 18.4 -25.6 -76.7 -13.9 25.5 25.5 0	2.5 -3.4 0 -3.7 -11.9 12.7 -5.3 11.5 11.5
OTHER TYPES OF SUPPORT: TOTAL ALL SOURCES FEDERAL, TOTAL DEPT OF DEFENSE DEPT OF HMS, TOTAL NIH OTHER HMS NSF ALL OTHER FEDERAL INSTITUTIONAL SUPPORT OTHER OUTSIDE SUPPORT, TOTAL ALL OTHER U.S. FOREIGN SELF-SUPPORT	5,322 2,022 682 307 375 107 2,511 7,589 7,8821 3,769	105, 138 5,028 2,129 228 231 100 2,340 8,313 4,002 4,311 83,621	106,565 4,734 2,257 431 190 116 1,930 8,525 8,489 4,023 4,466 84,817	111,111 5,184 2,771 455 293 162 70 1,888 8,851 8,392 4,471 88,684	2,746 418 304 114 148 1,819 9,140 7,892 3,704 4,188	1,569 8,921 8,9047 3,909 4,139	5,447 2,886 396 248 148 129 2,036 9,825 8,558 4,451 4,107	1.1 -1.7 6.7 -9.8 -5.1 -14.4 3.2 -9.0 3.3 .6 .7 .4	10.1 6.3 13.9 8	1.3 -8.7 -3.7 -14.4 3.2 -3.4 4.4 1.58 .22

^{1/} INCLUDES ESTIMATED DATA FOR MASTER'S-GRAUTING INSTITUTIONS, WHICH MERE SURVEYED ON A SAMPLE BASIS BEGINNING IN 1984.



TABLE 20. -- SCIENCE/ENGINEERING GRADUATE STUDENTS IN DOCTORATE-GRANTING INSTITUTIONS BY FIELD: 1980-86

		·		NUMBER				AVERAGE ANNUAL PERCENT CHANGE			
FIELD	1980	1981	1982	1983	1984	1985	1986	1980-85	1985-86	1980-86	
TOTAL, ALL FIELDS	333,669	339,968	346,796	358,063	363,068	372,022	384,203	2.2	3.3	2.4	
ENGINEERING AEROSPACE AGRICULTURAL BIOMEDICAL CHAICAL CIVIL ELECTRICAL ENGINEERING SCIENCE 7 NDUSTRIAL MECHANICAL METALL JRGICAL/MATERIALS MINING NUCLEAR PETROLEUM ENGINEERING NUCLEAR PETROLEUM ENGINEERING, N.E.C.	2,839 406	74,373 1,876 802 1,012 6,264 13,301 18,900 1,753 2,188 9,913 3,047 444 1,283 6,072	78, 178 1, 933 875 1, 064 6, 929 13, 531 20, 582 1, 840 9, 008 10, 767 3, 030 424 1, 301 6, 314	86, 411 2, 376 1, 185 7, 352 14, 506 23, 545 1, 981 12, 089 3, 338 498 1, 203 6, 841	88, 272 2, 413 1, 288 7, 196 14, 843 24, 599 10, 006 12, 966 3, 572 477 1, 234 6, 092	91, 384 2, 526 941 1,317 7,015 14,488 26,375 1,838 11,205 13,132 3,818 463 1,220 6,194	97, 032 2, 891 1, 074 1, 479 6, 891 14, 567 27, 925 22, 201 14, 530 4, 039 4, 039 1, 265 6, 829	5.8.4.63.27.2.47.62.17.3.9.7 2.1.2.17.3.9.7	6.2 10.1 14.1 12.3 -1.8 5.9 10.6 8.9 10.6 5.2 3.7 -3.5 10.3	5.6 8.9 6.4 22.5 7.5 4.8 8.0 3.1 3.1 6.7	
SCIENCES, TOTAL		265,595	268,618	271,652	274,796	230,638	287,171	1.3	2.3	1.4	
PHYSICAL SCIENCES ASTRONOHY CHEMISTRY PHYSICS PHYSICAL SCIENCES, N.E.C	25,393 628 15,105 9,579 81	25,780 597 15,244 9,864 75	26,499 632 15,778 10,018 71	27,727 618 16,525 10,515 69	28,413 639 16,599 10,988 187	29,315 671 17,152 11,300 192	30,602 689 17,602 12,073 238	2.9 1.3 2.6 3.4 18.8	4.4 2.7 2.6 6.8 24.0	3.2 1.6 2.6 3.9 19.7	
ENVIRONMENTAL SCIENCES	12,795 870 8,125 1,847	13,063 673 8,287 1,933	13,757 877 9,046 1,934	14,267 884 9,686 1,907	14,326 895 9,716 1,929	14,252 951 9,533 1,984	14,065 956 9,176 2,027	2.2 1.8 3.2 1.+	-1.3 .5 -3.7 2.2	1.6 2.0 1.6	
N.E.C	1,953 13.625	1,970	1,900	1,790	1,786	1,784	1,906	-1.8 2.3	2.7	2.4	
MATHEMATICAL SCIENCES COMPUTER SCIENCES	11,384	14,004	14,758	14,872	15,067 20,366	15,268 23,823	15,678 25,352	15.9	6.4	14.3	
LIFE SCIENCES	90,660	90,908	90,703	91,130	92,416	93,289	95,918	.6	2.8	.9	
AGRICULTURAL SCIENCES	11,579	11,347	11,577	11,515	11,331	10,689	10,670	-1.6	2	-1.4	
BIOLOGICAL SCIENCES ANATOHY BIOCHEMISTRY BIOLOGY BIOMETRY/EPIDEMIOLOGY BIOMETRY/EPIDEMIOLOGY BIOMETRY/EPIDEMIOLOGY BIOMETRY/EPIDEMIOLOGY BOTAN CELL BIOLOGY ENTOMOLOGY/PARASITOLOGY ENTOMOLOGY/PARASITOLOGY MICROBIOLOGY MUTRITION PATHOLOGY PHARMACOLOGY PHARMACOLOGY PHYSILLOGY ZOOLOGY BIOSCIENCES, N.E.C.	1,082 3,991 10,782 1,259 3,561 1,130 1,722 3,978 3,533 1,390 2,005 2,005 2,005 2,005 2,005	41,983 1,072 4,022 10,152 1,182 463 3,457 1,018 1,048 1,664 887 3,889 4,121 1,604 2,213 2,144 2,584	41,877 1,074 4,090 9,870 1,166 440 3,602 1,143 1,018 1,540 9,40 3,992 4,103 2,073 2,073 2,073 2,771 884	41,507 1,037 4,194 9,720 1,156 4,50 3,405 1,475 962 1,475 986 4,137 4,073 1,419 2,063 1,994 2,390 864	42,114 1,029 4,460 9,748 1,004 4,33 3,371 1,256 1,034 1,438 1,012 4,229 4,034 1,424 2,045 2,160 2,266 1,171	42,665 993 4,657 9,796 1,360 441 3,307 1,429 978 1,342 1,075 4,342 4,009 1,308 2,105 2,211 2,103	43,717 973 4,865 10,036 1,469 5,47 3,242 1,716 1,306 1,219 4,380 4,006 1,333 2,078 2,261 2,065 1,283	* -1.7 -1.9 -1.9 -1.9 -1.5 -2.8 -4.9 3.3 1.8 -1.2 1.0 -4.5	2.5 -2.0 4.5 2.4 8.0 20.1 -4.1 -2.7 13.4 -1.3 -1.3 -1.8	-1.84 -1.22 -1.62 -1.61 -3.11 -4.50 -1.67 -7.66 -1.22 -4.11 8.0	
HEALTH SCIENCES	36,405 1,002 220 12,750 2,408	37,578 942 177 14,071 2,523	37,249 836 190 14,297 2,496	38,108 776 247 14,924 2,612	38,971 850 303 15,913 2,487	39,935 835 324 15,741 2,517	41,531 930 373 16,184 2,652	1.9 -3.6 8.0 4.3	4.0 11.4 15.1 2.8 5.4	2.2 -1.2 9.2 4.1 1.6	
COMMUNITY HEALTH SPEECH PATHOLOGY/AUDIOLOGY VETERINARY SCIENCES CLINICAL MEDICINE, N.E.C. HEALTH RELATED, N.E.C.	7,013 6,748 496 1,200 4,568	7,130 6,545 458 1,216 4,516	6,676 6,756 446 1,321 4,231	6,001 6,771 440 1,301 5,036	6,121 6,041 531 1,309 5,416	6,524 6,237 610 1,503 5,644	6,525 6,270 607 1,526 6,464	-1.4 -1.6 4.2 4.6 4.3	*.5 5 1.5 14.5	-1.2 -1.2 3.4 4.1 5.0	
PSYCHOLOGY	29,384	29,052	29,082	29,048	29,991	30,560	30,759	.8	.7	.8	
SOCIAL SCIENCES AGRICULTURAL ECONOMICS ANTHROPOLOGY ECONOMICS	80,285 2,301 5,923	79,647 2,235 5,805	78,243 2,223 5,688	76,313 2,237 5,399	74,217 2,208 5,371	74,131 2,191 5,398	74,797 2,171 5,589	-1.6 -1.0 -1.8	9 9 3.5	-1.2 -1.0 -1.0	
ECONOMICS (EXCEPT AGRICULTURAL) GEOGRAPHY	12,231 2,723	12,407 2,736	12,652 2,705	12,440 2,627	11,916 2,604	11,733 2,542	11,581 2,596	-1.4	-1.3 2.1	9 8	
HISTORY AND PHILOSOPHY OF SCIENCE LINGUISTICS POLITICAL SCIENCE SOCIOLOGY SOCIOLOGY/ANTHRÉPOLOGY SOCIAL SCIENCES, N.E.C.	24,447 7,216 1,095	248 3,010 24,001 7,037 1,021 21,147	256 2,674 23,779 6,653 1,042 20,571	253 2,813 22,409 6,389 1,014 20,732	274 2,920 20,352 6,161 960 21,451	314 2,804 21,445 6,006 906 20,792	299 2,829 21,886 5,902 904 21,040	2.3 5 -2.6 -3.6 -3.7 4	-4.8 .9 2.1 -1.7 2 1.2	1.1 3 -1.8 -3.3 -3.1 1	

^{*} LESS THAN 0.05-PERCENT CHANGE



TABLE 21. -- SCIENCE/ENGINEERING GRADUATE STUDENTS IN DOCTORATE-GRANTING INSTITUTIONS BY GEOGRAPHIC DISTRIBUTION: 1980-86

DIVISION AND STATE				NUMBER				AYERAGE ANNUAL PERCENT CHANGE			
	1980	1981	1982	1983	1984	1985	1986	1980-85	1985-86	1980-86	
TOTAL, ALL INSTITUTIONS	333,669	339,968	346,796	358,063	363,068	372,022	384,203	2.2	3.3	2.4	
HER ENGLAND	i	26,215	26,810	28,128	28,309	28,915	29,737	2.4	2.8	2.5	
CONNECTICUT MAINE MASSACHUSĒTĪS NEM HAMPSHIRE RHODE ISLAND VERMONT	3,902 467 18,285 752 1,700	4,053 395 18,730 733 1,739 565	4,182 416 19,056 782 1,739 635	4,271 509 20,063 800 1,851 634	4,243 580 20,184 807 1,834 661	4,247 523 20,810 834 1,883 618	4,342 538 21,351 883 1,993 630	1.7 2.3 2.6 2.1 2.1 3.2	22.69 22.55.89	1.8 2.4 2.6 2.7 2.7 3.0	
IDDLE ATLANTIC		64,822	65,222	67,368	69,055	69,378	71,654	2.6	3.3	2 7	
NEM JERSEY NEM YORK PENNSYLVANIA	9,182 36,071 15,752	9,332 38,564 16,926	9,172 39,108 16,942	9,619 40,185 17,564	10,580 40,859 17,616	10,943 40,599 17,836	10,863 42,114 18,677	3.6 2.4 2.5	7 3.7 4.7	2.8 2.6 2.9	
AST NORTH CENTRAL		59,761	60,533	62,7 6 6	63,166	63,807	66,517	1.2	4.2	1.7	
ILLINDIS INDIANA MICHIGAN OHID HISCONSIN	16,122 7,345 12,744 15,773 8,023	16,073 7,694 12,132 15,922 7,940	16,095 7,919 12,544 16,099 7,876	16,799 8,207 12,968 16,803 7,989	17,059 7,491 13,158 17,378 8,080	17,617 6,966 13,286 17,951 7,987	18,238 7,732 14,019 18,492 8,036	1.8 -1.1 .8 2.6 1	3.5 11.0 5.5 3.0	2.1 .9 1.6 2.7	
HEST HORTH CENTRAL		23,552	24,093	24,670	24,713	25,239	25,854	1.2	2.4	1.4	
IOHA	4,541 4,356 5,097 5,983 2,138 907 701	4,385 4,234 5,209 5,813 2,326 913 672	4,682 4,216 5,202 6,031 2,284 946 732	4,938 4,492 5,267 5,841 2,397 946 789	4,831 4,402 5,404 6,048 2,346 776	4,924 4,260 5,806 6,170 2,322 949 808	5,080 4,258 5,821 6,588 2,319 970 818	1.6 4 2.6 .6 1.7 2.9	3.2 * .3 6.8 1 2.2 1.2	1.9 4 2.2 1.6 1.4 1.1 2.6	
SOUTH ATLANTIC	49,519	51,214	52,065	52,818	54,237	56,871	59,640	2.8	4.9	3.1	
DELAMARE DISTRICT OF COLUMBIA FLORIDA GEORGIA MARYLAND NORTH CARDLINA SOUTH CARDLINA VIRGINIA HEST VIRGINIA	1,084 8,830 9,623 5,672 5,185 6,785 2,760 6,931 2,709	1,135 9,641 10,333 5,766 5,431 6,664 2,826 7,011 2,407	1,173 8,649 10,916 5,913 5,484 7,116 2,944 7,153 2,717	1,180 8,245 11,319 5,892 5,892 7,363 3,017 7,273 2,637	1,112 8,669 11,661 6,437 5,973 7,449 3,150 3,933 1,883	1,150 8,930 12,748 6,199 6,185 7,477 3,087 1,855	1,189 9,531 12,614 6,584 6,609 7,938 3,752 1,865	1	3.4 6.7 -1.1 6.9 6.9 7.3	1.63 4.65 4.12 4.3 5.9 -6.0	
EAST SOUTH CENTRAL		12,655	12,867	13,168	13,678	14,204	14,822	1.5	4.4	2.0	
ALABAMA KENTUCKY MISSISSIPPI TENNESSEE	3,350 2,571 1,893 5,349	3,276 2,709 1,841 4,829	3,296 2,827 1,953 4,791	3,366 2,865 2,063 4,874	3,706 2,906 2,264 4,802	4,081 2,872 2,238 5,013	4,411 2,908 2,322 5,181	4.0 2.2 3.4 -1.3	8.1 1.3 3.8 3.4	4.7 2.1 3.5 5	
IEST SOUTH CENTRAL	28,026	28,205	30,249	32,724	33,360	33,360	33,994	3.5	1.9	3.3	
ARKANSAS	1,060 3,596 3,855 19,515	1,164 3,862 3,475 19,704	1,224 4,084 3,721 21,220	1,189 4,344 4,066 23,125	1,211 4,564 4,029 23,556	1,197 4,553 4,117 23,493	1,160 4,438 4,228 24,168	2.5 4.8 1.3 3.8	-3.1 -2.5 2.7 2.9	1.5 3.6 1.6 3.6	
MOUNTAIN	21,102	21,428	22,841	23,064	23,015	24,028	24,921	2.6	3.7	2.8	
ARIZONA COLORADO IDAHO MONTANA NEVADA NEM HEXICO UTAH HYDMING	5,228 6,881 968 830 450 2,203 3,882	5,593 6,885 913 810 464 2,296 3,737 730	6,397 6,923 937 976 413 2,372 4,021	6,384 6,702 1,004 1,019 532 2,551 4,037 835	6,485 6,456 1,008 1,030 561 2,464 4,232 779	6,997 6,778 1,041 980 547 2,551 4,321	7,174 7,398 1,035 911 536 2,647 4,480 740	6.335 1.34.00 2.324.3	2.5 9.1 -7.0 -2.0 3.8 3.7	5.4 1.2 1.1 1.6 3.0 3.1 2.4	
PACIFIC	49,538	50,132	50,008	50,974	50,956	53,546	54,319	1.6	1.4	1.5	
ALASKA CALIFORNIA HAMAII OREGON HASHINGTON	272 37,918 2,004 3,216 6,128	320 38,974 2,012 3,141 5,685	355 39,181 2,053 3,175 5,244	424 40,009 1,965 3,305 5,271	352 39,636 1,936 3,456 5,576	381 42,089 1,879 3,523 5,674	399 42,714 1,967 3,705 5,534	7.0 2.1 -1.3 1.8 -1.5	4.7 1.5 4.7 5.2 -2.5	6.6 2.0 3 2.4 -1.7	
OUTLYING AREAS	1,953	1,984	2,108	2,383	2,579	2,674	2,745	6.5	2.7	5.8	

^{*} LESS THAN 0.05-PERCENT CHANGE



TABLE 22. -- GRADUATE SCIENCE/ENGINEERING ENROLLMENT IN DOCTORATE-GRANTING INSTITUTIONS, RANKED BY TOTAL GRADUATE SCIENCE/ENGINEERING ENROLLMENT: 1981-86

INSTITUTIONAL RANKING	1981	1982	1983	1984	1985	1986
TOTAL, ALL INSTITUTIONS	339,951	346,796	358,063	363,068	372,022	384,203
1 UNIVERSITY OF SOUTHERN CALIFO INIA 2 UNIVERSITY OF MINNESOTA 3 UNIVERSITY OF CALIF AT BERKEL Y 4 OHIO STATE UNIVERSITY 5 UNIVERSITY OF HISCONSIN - MAC.SON 6 UNIV OF TEXAS AT AUSTIN 7 UNIVERSITY OF ILLINDIS - URBANA 8 UNIVERSITY OF MICHIGAN 9 MASSACHUSETTS INSTITUTE OF TECHNOLOGY 10 GEORGE MASHINCTON UNIVERSITY	7,507 5,209 5,598 4,787 5,405 4,032 4,313 4,401 3,790	7,651 5,202 5,400 4,704 5,346 4,286 4,494 4,310 3,886 3,886 3,308	8,343 5,249 5,381 4,917 5,247 4,756 4,556 4,566 4,566 3,388	7,341 5,372 5,545 4,874 5,411 4,726 4,526 4,572 3,664	8,373 5,760 5,448 5,044 5,229 4,673 4,673 4,673 4,552 3,532	8,213 5,7549 5,360 5,229 4,980 4,873 4,727 4,727
TOTAL. 1ST 10 INSTS.	48,992	48,587	50,795	50,275	52,164	53,645
11 RUTGERS THE STATE UNIVERSITY 12 UNIVERSITY OF PITTSBURGH 13 UNIVERSITY OF CALIF AT LOS ANGELES 14 UNIVERSITY OF MASHINGTON 15 PENNSYLVANIA STATE UNIVERSITY 16 STANFORD UNIVERSITY 17 TEXAS A & W UNIVERSITY 18 UNIVERSITY OF ARIZONA 19 PURDUE UNIVERSITY 20 CORNELL UNIVERSITY TOTAL, 1ST 20 INSTS.	4,247 4,558 4,266 4,231 3,573 3,844 3,365 3,169 3,917 3,048	4,078 4,643 4,084 3,870 3,503 4,026 3,(79 3,159 4,192 3,011	4,387 4,694 4,198 3,905 4,297 3,907 3,295 4,322 3,113	4,212 4,717 4,107 4,165 3,628 4,134 3,929 3,449 3,586 3,240	4,265 4,314 4,214 4,234 3,781 4,135 3,795 3,601 3,654 3,316	4,359 4,215 4,201 4,148 4,129 4,049 4,019 3,833 3,764 3,673
TOTAL, 1ST 20 INSTS.	87,210		90,469		91,473	94,035
21 VIRGINIA POLYTECHNIC INST AND STATE UNI 22 UNIVERSITY OF MARYLAND - COLLEGE PARK 23 UNIVERSITY OF COLORADO 24 MICHIGAN STATE UNIVERSITY 25 UNIVERSITY OF FLORIDA 26 HARVARD UNIVERSITY 27 NEH YORK UNIVERSITY 28 COLUMBIA UNIVERSITY MAIN DIVISION 29 FLORIDA INSTITUTE OF TECHNOLOGY 30 SUNY - BUFFALO	2,350 2,867 3,517 3,050 2,603 3,042	2,373 2,975 3,501 3,079 2,812 3,071 3,159 2,720 2,260	2,555 3,196 3,187 3,201 2,849 2,842 3,853 2,993 2,904 2,338	2,838 3,333 3,070 3,125 3,049 3,013 3,322 3,020 3,049 3,041	3,527 3,439 3,207 3,070 3,244 3,216 3,680 3,065 2,988	3,559 3,515 3,430 3,315 3,305 3,274 3,220 3,156 3,139 3,097
TOTAL, 1ST 30 INSTS.	115,806	116,693	, ,	120,302	124,164	127,045
31 NORTH CAROLINA STATE UNIV AT RALEIGH 32 SOSTON UNIVERSITY 33 UNIVERSITY OF ILLINOIS AT CHICAGO 34 UNIVERSITY OF TENNESSEE AT KNOXVILLE 35 UNIV OF NORTH CAROLINA AT CHAPEL HILL 36 UNIVERSITY OF CALIF AT DAVIS 37 ARIZONA STATE UNIVERSITY 38 IDMA STATE UNIVERSITY OF SCI & TECH 39 UNIVERSITY OF MASSACHUSETTS AT AMHERST 40 NORTHEASTERN UNIVERSITY	0,100	2,553 2,682 2,424 2,581 2,170 3,399	2,634 2,592 2,530 2,770 2,638 2,557 2,446 2,637 2,317 3,539	2,729 2,595 2,669 2,604 2,571 2,444 2,407 2,825	2,690 2,712 2,638 2,735 2,669 2,662 2,662 2,566 2,566 2,699	2,964 2,908 2,801 2,797 2,757 2,746 2,729 2,619 2,617 2,615
TOTAL, 1ST 40 INSTS.	140,937	142,765	147,047	146,382	150,715	154,596
41 GEORGIA INSTITUTE OF TECHNOLOGY 42 UNIVERSITY OF CINCINNAT! 43 INDIAMA UNIVERSITY 44 UNIVERSITY OF PENNSYLVANIA 45 HAYNE STATE UNIVERSITY 46 UNIVERSITY OF OKLAHOMA 47 SUNY — STONY BROOK 48 UNIVERSITY OF CONNECTICUT 49 UNIVERSITY OF TOMA 50 SYRACUSE UNIVERSITY	1,998 2,420 2,376 2,619 1,892 2,413 2,257 1,877 2,082	2,019 2,422 2,271 2,642 2,124 1,993 2,261 2,396 2,031 2,172	2,000 2,468 2,362 2,573 2,149 2,294 2,297 2,460 2,226 2,388	2,339 2,519 2,411 2,436 2,255 2,310 2,261 2,526 2,526 2,454	2,271 2,483 1,869 2,523 2,333 2,358 2,270 2,309 2,245 2,279	2,554 2,517 2,513 2,510 2,491 2,380 2,355 2,354 2,354 2,351
TOTAL, 1ST 50 INSTS.	162,702	165,096	170,264	170,097	173,655	179,003

CONTINUED ON NEXT PAGE.



TABLE 22. -- GRADUATE SCIENCE/ENGINEERING ENROLLMENT IN DOCTORATE-GRANTING INSTITUTIONS, RANKED BY TOTAL GRADUATE SCIENCE/ENGINEERING ENROLLMENT: 1981-86

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INSTITUTIONAL RANKING	1981	1982	1983	1984	1985	1986
51 PDLYTECHNIC UNIVERSITY 52 SAN DIEGO STATE UNIVERSITY 53 UNIV OF TEXAS AT ARLINGTON 54 UNIVERSITY OF UTAH 55 NEM JERSEY INSTITUTE OF TECHNOLOGY 56 UNIVERSITY OF SOUTH CAROLINA 57 UNIVERSITY OF MISSOURI - COLUMBIA 58 UNIVERSITY OF KANSAS 59 TEXAS MOMAN'S UNIVERSITY 60 UNIVERSITY OF HAMALI AT MANDA TOTAL, 1ST 60 INSTS. 61 CASE HESTERN RESERVE UNIVERSITY	2,304 1,812 1,723 1,917 830 1,774 1,954 2,212 1,660 2,012	1,345 2,058 1,862 1,942 849 1,814 2,060 2,255 1,053	1,540 1,905 1,905 2,052 940 1,814 1,949 2,387 1,945	2,100 2,111 1,692 1,896	1,929 2,224 2,117 2,180 1,951 1,929 1,987 2,124 1,928 1,879	2,324 2,280 2,198 2,185 2,162 2,136 2,067 2,047 1,967
TOTAL, 1ST 60 INSTS.	180,900	183,024	188,662		ľ	200,347
62 UNIVERSITY OF LIMELE 63 CUNY GRADUATE SCHOOL AND UNIV CENTER 64 LOUISIAMA STATE UNIVERSITY SYSTEM 65 UNIVERSITY OF KENTUCKY 66 UNIVERSITY OF HOUSTON-UNIVERSITY PARK 67 UNIVERSITY OF MISCONSIN - MILMAUKEE 68 YALE UNIVERSITY 69 UNIVERSITY OF VIRGINIA 70 RENSSELAER POLYTECHNIC INSTITUTE	1,124 1,812 1,638 1,648 1,410	1,278 1,830 1,823 1,757 1,482 1,789 1,686 1,529 1,695	1,779 1,408 1,815 1,852 1,716 1,684 1,936 1,707 1,539	1,848 1,738 1,835 2,045 1,889 1,486 1,885 1,612 1,631	1,731 2,060 1,872 1,622 1,894 1,824	1,947 1,932 1,921 1,908 1,899 1,884 1,884
TOTAL, 1ST 70 INSTS.	196.858	199 629		207,457	212, 156	219,292
71 STEVENS INSTITUTE OF TECHNOLOGY 72 COLORADO STATE UNIVERSITY 73 OREGON STATE UNIVERSITY 74 LONG ISLAND UNIVERSITY 75 COLUMBIA UNIVERSITY TEACHERS COLLEGE 76 NORTHMESTERN UNIVERSITY 77 TEMPLE UNIVERSITY 78 UNIVERSITY OF GEORGIA 79 VIRGINIA COMMONHEALTH UNIVERSITY 80 SANTA CLARA UNIVERSITY	1,433 1,803 1,652 2,130 1,733 1,536 1,280 1,779 1,355	1,222 1,831 1,622 2,096 1,690 1,590 1,212 1,869 1,370 1,165	1,300 1,813 1,657 1,945 1,400 1,635 1,478 1,731 1,318 1,310	1,750 1,757 1,732 2,089 1,713 1,680 1,469 1,746 1,346	1,766 1,768 1,673 1,688 1,753 1,759 1,449 1,667 1,434	1,828 1,809 1,797 1,760 1,758 1,740 1,691 1,691 1,671
TOTAL TO TOWN OR TO LATOT	212 516	215 204	221,510	224,155	228,693	236,704
81 ILLINDIS INSTITUTE OF TECHNOLOGY 82 MEST VIRGINIA UNIVERSITY 83 UNIVERSITY OF CHICAGD 84 FLORIDA STATE UNIVERSITY 85 AMERICAN UNIVERSITY 86 SOUTHERN ILLINDIS UNIV AT CARBONDALE 87 HESTERN MICHIGAN UNIVERSITY 88 UNIVERSITY OF NEW MEXICO 89 CARROGIE-MELLON UNIVERSITY 90 OKLAHDMA STATE UNIVERSITY	1,758 2,142 1,427 1,516 1,833 1,044 1,365 1,432 1,093 1,301	1,737 2,456 1,420 1,650 1,705 1,127 1,491 1,442 1,081	1,784 2,486 1,444 1,598 1,459 1,288 1,381 1,540 1,144 1,479	1 450	1,781 1,652 1,503 1,559 1,720 1,505 1,468 1,533 1,419 1,439	1,636 1,629 1,625 1,604 1,600 1,582 1,556 1,555
TOTAL, 1ST 90 INSTS.	227,427	230,848	237,113	238,945	244,272	252,568
91 UNIVERSITY OF CALIF AT SAW DIEGD 92 JOHNS HOPKINS UNIVERSITY 93 UNIVERSITY OF PUERTO RICO — RIO PIEDRAS 94 CATHOLIC UNIVERSITY OF AMERICA 95 HASHINGTON UNIVERSITY 96 KANSAS STATE UNIV OF AGR & APPLIED SCI 97 UNIVERSITY OF CALIF AT IRVINE 98 UNIVERSITY OF CALIF AT IRVINE 98 UNIVERSITY OF AKRON 99 HASHINGTON STATE UNIVERSITY 100 NEW SCHOOL FOR SOCIAL RESEARCH TOTAL, 1ST 100 INSTS.	1,159 1,498 1,041 1,719 1,339 1,249 1,142 1,145 1,454	1,210 1,424 1,031 2,713 1,301 1,266 1,163 1,061 1,374 1,923	1,493 1,228 1,577 1,095 1,331 1,178 1,132	1,303 1,395 1,382 1,630 1,265 1,377 1,175 1,225 1,411 1,585	1,332	1,528 1,528 1,490 1,452 1,439 1,401 1,398 1,386
TOTAL, 1ST 100 INSTS.	240,679	244,314				
TOTAL, ALL OTHER INSTS.	99,272	102,482	107,582	110,375	113,704	117,223

NOTE: INCLUDES MEDICAL SCHOOLS SOURCE: NATIONAL SCIENCE FOUNDATION, DRS.



TABLE 23. -- GRADUATE SCIENCE/ENGINEERING ENROLLMENT IN DOCTORATE-GRANTING INSTITUTIONS BY MAJOR FIELD, RANKED BY TOTAL GRADUATE SCIENCE/ENGINEERING ENROLLMENT: 1986

	<u> </u>	ENGI-	PHYSICAL	TENVIRON-	HTAM	COMPUTER	LIFE	PSYCHUL-	SOCIAL
INSTITUTIONAL RANKING	TOTAL	NĚERÍNG	SCIENCES	MENTAL SCIENCES	SCIÊNCES	SCIENCES	sciences	DGY	SCIENCES
TOTAL, ALL INSTITUTIONS	384,203	97,032	30,602	14,065	15,678	25,352	95,918	30,759	74,797
1 UNIVERSITY OF SOUTHERN CALIFORNIA 2 UNIVERSITY OF MINNESOTA 3 UNIVERSITY OF CALIF AT BERKELEY 4 OHIO STATE UNIVERSITY 5 UNIVERSITY OF MISCONSIN - MADISON 6 UNIV OF TEXAS AT AUSTIN 7 UNIVERSITY OF ILLINDIS - URBANA 8 UNIVERSITY OF MICHIGAN 9 MASSACHUSETTS INSTITUTE OF TECHNOLOGY 10 GEORGE MASHINGTON UNIVERSITY	8,213 5,775 5,549 5,360 5,229 4,980 4,873 4,727 4,567 4,372	4,994 1,128 1,755 1,200 1,026 1,556 1,435 2,053 2,750 3,027	148 371 678 420 500 620 632 298 512 37	89 76 132 196 376 188 78 293 138	83 235 300 290 300 152 209 170 128 248	371 326 200 235 209 259 394 0	456 1,850 1,233 1,574 1,634 669 1,074 904 253 308	107 717 118 251 358 462 188 226 44	1,965 1,072 1,133 1,194 826 1,074 863 783 553 555
TOTAL, 1ST 10 INSTS.	53,645	20,924	4,216	1,590	2,115	2,183	9,955	2,644	10,018
11 RUTGERS THE STATE UNIVERSITY 12 UNIVERSITY OF PITTSBURGH 13 UNIVERSITY OF CALIF AT LOS ANGELES 14 UNIVERSITY OF MASHINGTON 15 PENNSYLVANIA STATE UNIVERSITY 16 STANFORD UNIVERSITY 17 TEXAS A & M UNIVERSITY 18 UNIVERSITY OF ARIZONA 19 PURDUE UNIVERSITY 20 CCRNELL UNIVERSITY	4,359 4,215 4,201 4,148 4,129 4,049 3,833 3,764 3,673	842 851 1,019 1,028 1,528 2,222 1,115 861 1,450 1,002	476 300 446 345 419 328 368 472 466 393	209 86 180 231 249 170 373 503 96 84	203 98 111 158 125 223 85 92 205 171	295 319 231 130 133 382 134 321 120	1,054 1,345 1,396 1,445 850 334 1,270 1,031 937 1,072	201 81 205 129 234 50 213 68 224	1,079 1,135 613 682 591 340 461 485 266 784
TOTAL, 1ST 20 INSTS.	94,035	32,842	8,229	3,771	3,586	÷,347	20,689	4,117	16,454
21 VIRGINIA POLYTECHNIC INST AND STATE UNI 22 UNIVERSITY OF MARYLAND - COLLEGE PARK 23 UNIVERSITY OF COLORADO 24 MICHIGAN STATE UNIVERSITY 25 UNIVERSITY OF FLORIDA 26 HARVARD UNIVERSITY 27 NEM YORK UNIVERSITY 28 COLUMBIA UNIVERSITY 29 FLORIOA INSTITUTE OF TECHNOLOGY 30 SUNY - BUFFALD	3,559 3,515 3,430 3,315 3,305 3,274 3,224 3,156 3,139 3,097	1,895 1,074 849 463 981 614 0 869 295 766	187 402 390 304 278 323 191 216 81 268	167 162 159 116 64 41 65 101 69	136 210 141 173 110 71 170 73 37	127 247 146 121 122 0 150 178 327 137	579 583 796 1,169 1,190 891 764 837 33 853	199 140 172 161 177 69 466 39 162 301	269 697 777 808 382 1,265 1,414 843 2,135 634
TOTAL, 1ST 30 INSTS.	127,045	40,648	10,869	4,757	4,803	5,902	28,384	6,003	25,679
31 NORTH CAROLINA STATE UNIV AT RALEIGH 32 BOSTON UNIVERSITY 33 UNIVERSITY OF ILLINOIS AT CHICAGO 34 UNIVERSITY OF TENNESSEE AT KNOXYILLE 35 UNIV OF NORTH CAROLINA AT CHAPEL HILL 36 UNIVERSITY OF CALIF AT DAVIS 37 ARIZONA STATE UNIVERSITY 38 IDMA STATE UNIVERSITY 39 UNIVERSITY OF MASSACHUSETTS AT AMHERST 40 NORTHEASTERN UNIVERSITY	2,964 2,908 2,807 2,797 2,757 2,744 2,729 2,619 2,617 2,615	1,255 434 845 831 32 547 1,026 677 625 1,506	127 132 204 173 239 202 180 336 314	84 27 33 64 187 70 65 45 90	198 49 229 77 114 86 50 181 64 70	92 81 0 123 103 128 216 97 163 125	773 1,032 946 677 1,344 1,372 400 774 815 353	136 186 97 226 109 31 96 92 115	299 967 447 626 629 308 696 417 431 329
	154,596	48,426	12,964	5,422	5,921	7,030	36,8 /0	7,135	30,828
41 GEORGIA INSTITUTE OF TECHNOLOGY 42 UNIVERSITY OF CINCINNATI 43 INDIANA UNIVERSITY 44 UNIVERSITY OF PENNSYLVANIA 45 HAYNE STATE UNIVERSITY 46 UNIVERSITY OF OKLAHOMA 47 SUNY - STONY BROOK 48 UNIVERSITY OF CONNECTICUT 49 UNIVERSITY OF CONNECTICUT 50 SYRACUSE UNIVERSITY	2,554 2,517 2,513 2,491 2,382 2,382 2,355 2,354 2,351	1,873 904 39 619 681 707 271 404 433 862	158 219 316 283 215 132 292 139 150 197	67 75 119 21 9 124 172 49 49	48 57 137 39 41 45 195 219 88	255 0 166 218 161 0 99 107 90 227	33 669 1,024 386 808 803 512 866 744 222	53 186 109 55 199 50 181 210 47	67 407 603 889 377 516 658 556 622 596
	179,003	55,219	15,065	6,136	6,874	8,353	42,882	8,355	36,119

CONTINUED ON NEXT PAGE.



TABLE 23. -- GRADUATE SC'ENCE/ENGINEERING ENROLLMENT IN DOCTORATE-GRANTING INSTITUTIONS BY MAJOR FIELD, RANKED BY TOTAL GRADUATE SCIENCE/ENGINEERING ENROLLMENT: 1986

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CUNITACED								**************************************	PRPATE.
INSTITUTIONAL RANKING	TOTAL	ENGI- NEERING	SCIENCES	ENVIRON- MENTAL SCIENCES	MATH SCIENCES	SCIENCES	SCIENCES	PSYCHOL- OGY	SCIENCES
51 POLYTECHNIC UNIVERSITY 52 SAN DIEGO STATE UNIVERSITY 53 UNIV OF TEXAS AT ARLINGTON 54 UNIVERSITY OF UTAH 55 NEW JERSEY INSTITUTE OF TECHNOLOGY 56 UNIVERSITY OF SOUTH CAROLINA 57 UNIVERSITY OF MISSOURI — COLUMBIA 58 UNIVERSITY OF KANSAS 59 TEXAS MOMAN'S UNIVERSITY 60 UNIVERSITY OF HAMALI AT MANDA	2,324 2,280 2,198 2,185 2,162 2,136 2,067 2,049 1,976 1,967	1,430 346 835 546 1,299 312 529 360 18	180 126 107 230 0 186 96 104 7	0 43 63 91 0 137 61 55 0	34 205 58 711 17 106 56 39 123	672 0 207 78 786 101 0 80 0 58	741 241 566 0 537 664 729 1,576 695	0 124 34 70 0 117 117 267 220 98	8 695 653 533 60 640 544 415 708
TOTAL, 1ST 60 INSYS.	200,347	61,046	16,206	6,720	7,600	10,335	48,631	9,402	40,407
61 CASE MESTERN RESERVE UNIVERSITY 62 UNIVERSITY OF LOHELL 63 CUNY GRADUATE SCHOOL AND UNIV CENTER 64 LOUISIANA STATE UNIVERSITY SYSTEM 65 UNIVERSITY OF KENTUCKY 66 UNIVERSITY OF KENTUCKY 67 UNIVERSITY OF HISCONSIN - MILMAUKEE 68 YALE UNIVERSITY 69 UNIVERSITY OF YIRGINIA 70 REMSSELAER POLYTECHNIC INSTITUTE	1,947 1,932 1,921 1,908 1,899 1,895 1,884 1,870 1,848 1,841	551 921 111 474 266 693 395 176 549 1,208	131 231 263 163 109 204 125 257 201 184	8 59 125 142 183 546 65 26	92 237 77 79 79 47 44 63 61	68 242 0 51 67 225 77 66 116 170	616 169 365 667 628 171 276 737 397	38 45 546 107 110 165 289 107 78 34	443 28 559 242 598 207 623 418 381 82
TOTAL, 1ST 70 INSTS.	219,292	66,390	18,074	7,329	8,494	11,417	52,679	10,921	43,988
71 STEVENS INSTITUTE OF TECHNOLOGY 72 COLORADO STATE UNIVERSITY 73 OREGON STATE UNIVERSITY 74 LONG ISLAND UNIVERSITY 75 COLUMBIA UNIVERSITY TEACHERS COLLEGE 76 NORTHMESTERN UNIVERSITY 77 TEMPLE UNIVERSITY 78 UNIVERSITY OF GEORGIA 79 VIRGINIA COMMONHEALTH UNIVERSITY 80 SANTA CLARA UNIVERSITY	1,828 1,809 1,797 1,760 1,758 1,740 1,691 1,691 1,665	529 380 435 0 0 520 0 15 167 1,073	177 135 135 35 0 180 94 102 51	0 141 146 0 0 28 19 60 0	26 81 105 25 223 42 112 79 43 17	1,096 53 102 75 0 165 315 41 0 480	733 759 1,025 668 407 352 734 615	0 112 0 293 782 130 164 142 152 95	0 174 115 307 85 268 637 518 643
TOTAL, 1ST 80 INSTS.	236,704	69,509	18,983	7,723	9,247	13,744	57,972	12,791	46,735
81 ILLINDIS INSTITUTE OF TECHNOLOGY 82 MEST VIRGINIA UNIVERSITY 83 UNIVERSITY OF CHICAGO 84 FLORIDA STATE UNIVERSITY 85 AMERICAN UNIVERSITY 86 SOUTHERN ILLINDIS UNIV AT CARBONDALE 87 MESTERN MICHIGAN UNIVERSITY 88 UNIVERSITY OF NEW MEXICO 89 CARNEGIE-MELLON UNIVERSITY 90 CKLAHOMA STATE UNIVERSITY	1,636 1,629 1,625 1,604 1,588 1,556 1,556 1,535	682 283 0 0 0 191 67 427 644 531	96 68 318 150 103 84 33 155 121	0 140 41 146 0 63 38 70 0 58	18 101 87 88 172 30 73 63 87 93	517 0 20 91 227 68 137 109 144	136 609 270 203 60 557 159 239 38 357	130 57 116 114 69 130 117 81 21 66	57 371 773 812 969 465 938 412 480 212
TOTAL, 1ST 90 INSTS.	252,568	72,334	20,224	8,279	10,059	15,156	60,600	13,692	52,224
91 UNIVERSITY OF CALIF AT SAN DIEGO 92 JOHNS HOPKINS UNIVERSITY 93 UNIVERSITY OF PUERTO RICO - RIO PIEDRAS 94 CATHOLIC UNIVERSITY OF AMERICA 95 MASHINGTON UNIVERSITY 96 KANSAS STATE UNIV OF AGR & APPLIED SCI 97 UNIVERSITY OF CALIF AT IRVINE 98 UNIVERSITY OF AKRON 99 MASHINGTON STATE UNIVERSITY 100 NEM SCHOOL FOR SOCIAL RESEARCH	1,528 1,528 1,490 1,452 1,439 1,409 1,401 1,398 1,386 1,381	361 168 0 303 370 244 596 424 273 0	286 70 126 71 115 104 169 286 91	180 48 0 0 32 22 2 0 48 88 0	107 49 555 100 71 40 34 39	0 0 0 97 86 85 0 53	284 883 190 328 562 591 224 278 536	51 74 186 119 79 132 32 83 62 454	259 236 937 621 144 159 255 245 244 927
TOTAL, 1ST 100 INSTS.	266,980	75,073	21,542	8,697	10,504	15,477	64,476	14,964	56,247
TOTAL, ALL OTHER INSTS.	117,223	21,959	9,060	5,368	5,174	9,875	31,442	15,795	18,550

NOTE: INCLUDES MEDICAL SCHOOLS SOURCE: NATIONAL SCIENCE FOUNDATION, SRS.



TABLE 24. -- SCIENCE/ENGINEERING POSTDOCTORATES IN DOCTORATE-GRANTING INSTITUTIONS BY FIELD: 1980-86

FIELD			_	NUMBER				AVI PEI	AVERAGE ANNUAL PERCENT CHANGE		
	1980	1981	1982	1983	1984	1985	1986	1980-85	1985-86	1980-86	
TOTAL, ALL FIELDS	18,411	19,646	19,366	20,761	21,587	22,598	24,136	4.2	6.8	4.6	
ENGINEERING AEROSPACE AGRICULTURAL BTDMEDICAL CIVIL ELECTRICAL ENGINEERING SCIENCE INDUSTRIAL MECHANICAL METALLURGICAL/MATERIALS MINING NUCLEAR PETROLEUM ENGINEERING, N.E.C.	978 20 9 183 124 121 79 16 137 172 3 22 6 58	1,040 14 934 171 107 191 87 130 193 146 26 47	978 25 31 174 108 176 76 130 166 10 18	1,102 32 28 198 131 174 71 14 182 204 19 15	1, 195 42 34 245 146 171 63 196 168 19 4 59	1,349 151 157 273 122 176 90 202 245 19 31 652	1,420 488 172 295 140 172 739 239 249 25 31 1	6.6 20.6 10.8 10.9 8.3 7.8 2.6 8.1 7.4 7.1	5.3 -5.9 13.3 10.6 8.1 14.8 -2.3 -18.9 45.0 18.3 1.6 0 -83.3 -5.8	6.4 15.7 11.2 10.9 8.3 2.0 0 -1.3 10.4 9.7 6.4 5.9 -25.8	
SCIENCES, TDTAL	17,433	18,606	18,388	19,659	20,392	21,249	22,716	4.0	6.9	4.5	
PHYSICAL SCIENCES ASTRONOMY CHEMISTRY PHYSICS PHYSICAL SCIENCES, N.E.C.	4,264 141 2,710 1,398 15	4,462 132 2,870 1,445 15	4,281 148 2,805 1,326	4,444 111 2,973 1,350 10	4,386 118 2,906 1,320 42	4,517 138 2,995 1,342 42	4,813 133 3,151 1,497 32	1.2 4 2.0 8 22.9	6.6 -3.6 5.2 11.5 -23.8	2.0 -1.0 2.5 1.1 13.5	
ENVIRDNMENTAL SCIENCES	308 43 194 57	339 46 213 67	335 32 216 78	415 41 237 120	488 74 250 151	375 48 226 79	418 43 247 98	4.0 2.2 3.1 6.7	11.5 -10.4 9.3 24.1	5.2 .0 4.1 9.5	
MATHEMATICAL SCIENCES	14 162	13 113	9	17 170	13	22	30	9.5	36.4	13.5	
COMPUTER SCIENCES	43	34	194 46	82	203 63	226 74	201 74	6.9	-11.1	3.7 9.5	
LIFE SCIENCES	11,743	12.855	12,725	13,756	14,473	15,191	16,328	5.3	7.5	5.6	
AGRICULTURAL SCIENCES	239	284	279	295	358	357	388	8.4	8.7	8.4	
BIOLDGICAL SCIENCES ANATOMY BIDCHMISTRY BIDLOGY BIDHETRY/EPIDEMIOLOGY BIDPHYSICS BOTAMY CELL BIOLOGY ECDLOGY ENTOMOLOGY/PARASITOLOGY ENTOMOLOGY/PARASITOLOGY MUTRITION PATHOLOGY PHARMACOLOGY PHARMACOLOGY PHYSIOLOGY OUTPITION PATHOLOGY PHYSIOLOGY PHYSIOLOGY PHYSIOLOGY PHYSIOLOGY BIDSCIENCES, N.E.C.	7,106 237 1,599 989 72 151 220 410 22 119 253 873 129 477 624 668 193 65	7,706 248 1,724 64 155 240 532 44 133 298 967 171 468 755 758 207	7,756 7,261 1,684 53 129 538 516 516 518 519 314 1,014 138 7777 673 203 67	8,386 1,765 1,014 183 369 653 112 1,025 1584 1,025 1584 1,025	8,740 282 1,803 1,127 67 121 347 648 113 382 1,071 1507 816 817 157	9,229 310 1,892 1,128 1,128 101 371 731 737 1,168 202 861 861 840 212	9,857 342 2,009 1,109 133 394 827 143 1,274 185 906 217 142	5.53.47.97.03.02.9.04.47.7.9.6	6.8 10.3 7.1 -1.7 67.8 31.7 6.2 13.1 0 2.9 13.5 9.1 -8.4 2.8 7.9 2.4 -21.1	5.6 6.3 4.09 5.5 -2.12 12.4 13.1 8.5 6.2 6.2 13.9	
HEALTH SCIENCES DENTISTRY NEUROLOGY NURSING PHARMACEUTICAL SCIENCES PREVENTIVE MEDICINE/	4,398 79 283 9 233	4,865 139 287 8 243	4,690 246 254 0 238	5,075 197 301 6 241	5,375 186 352 14 269	5,605 224 332 17 318	6,083 127 419 16 384	5.0 23.2 3.2 13.6 6.4	8.5 -43.3 26.2 -5.9 20.8	5.6 8.2 6.8 10.1 8.7	
COMMUNITY HEALTH SPEECH PATHOLOGY/AUDIOLOGY VETERINARY SCIENCES CLINICAL MEDICINE, N.E.C. HEALTH RELATED, N.E.C.	161 18 52 3,461 102	135 19 31 3,890 113	143 10 49 3,658 92	142 18 50 4,004 116	168 18 78 4,172 118	167 18 69 4,322 138	194 12 100 4,652 179	.7 .0 5.8 4.5 6.2	16.2 -33.3 44.9 7.6 29.7	3.2 -6.5 11.5 5.1 9.8	
PSYCHDL@GY	475	471	520	435	422	498	526	1.0	5.6	1.7	
SDCIAL SCIENCES AGRICULTURAL ÉCONOMICS ANTHROPDLOGY	438 8 40	332 6 30	287 10 34	357 28 60	357 18 57	368 31 57	356 35 52	-3.4 31.1 7.3	-3.3 12.9 -8.8	-3.4 27.9 4.5	
ECDNOMICS (EXCEPT AGRICULTURAL) GEDGRAPHY LISTABLY AND BUILDEDBLY	146 15	30 23	13 5	20 7	26 14	19 10	22 11	-33.5 -7.8	15.8 10.0	-27.1 -5.0	
HISTORY AND PHILOSOPHY DF SCIENCE LINGUISTICS POLITICAL SCIENCE SOCIOLOGY SOCIOLOGY/ANTHROPOLOGY SOCIAL SCIENCES, N.E.C.	15 54 30 99 3 28	21 47 46 90 0 39	14 47 44 89 2 29	19 51 43 99 1 29	12 30 31 114 0 55	11 26 44 92 2 76	11 25 66 84 1 49	-6.0 -13.6 8.0 -1.5 -7.8 22.1	.0 -3.8 50.0 -8.7 -50.0 -35.5	-5.0 -12.0 14.0 -2.7 -16.7 9.8	

